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Original Articles

THE UPLANDS IN MEDICINE.

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A century ago medicine was groping about with the tallow dip and the torch. Little was illuminated but the darkness.

To-day we are coming into the clear broad light of the hills.

We can look back on a marvelous march from valley shade to the uplands.

In the clearer light, new truths and principles in the science of medicine are springing up in endless succession.

In the art of medicine the skilled touch and expert hand are developing their perfect work. Our material advancement is ideal; not so, altogether, the conditions that govern our methods and men. Herein our showing to-day brings to us not that honor or credit which we should have attained.

Co-operation and interdependent efforts should have accomplished more where the light and atmosphere of the uplands lend so much of inspiration. Unfortunately, while unity was lacking, ambition slumbered and slept.

To-day, to an awakening professional spirit, there is a call for betterments, a call to bring up all lines abreast of our material advancement.

We need a better showing for the time employed by the students in schools of medicine.

We need better text-books, journals and works pertaining to the science of medicine, in the schools and out of the schools.

We need more systematic and thorough work in many of our county medical societies, together with the fostering of a glowing, if not a burning, sense of brotherhood.

We need plans worked out and programs arranged for co-operating with, and giving to the public, by illustrated lectures and through the press, information which it ought to know and must know.

We need, and must have men of a high general average,—standardized men—men trained and equipped to fight to a finish those evils flourishing in our midst, which are not only harmful and destructive to the people, but depraving and damning to ourselves.

This outline of betterments calls for specifications.

As to the students in medicine: Are they getting a return in knowledge and equipment commensurate to the time spent within college walls? No; probably not in one school the world around.

In these days of specialism in every department of medicine, the primary spe-

cialty is overlooked,—that of devising pedagogic methods which will, in one-half to three-quarters of the time now spent, fix in the average student brain, an equal amount of practical knowledge.

During the century invention has developed a transit so rapid, that the stride of the man of early days now gives place to the stride of the mythical being wearing the seven-league boots.

The woof and warp, woven so laboriously at the ancient loom, now commingle before our eyes while seconds count as did hours. System and improvements in business methods and industries, whether in counting house or factory, get practical results between sun and sun which once called for weeks of toil.

Why then, does not invention of better methods of instruction and education keep pace with the industries?

With present methods, the student of the future will be overwhelmed in an attempt to keep pace with the advance in medicine which is to come.

The student is made a drudge. He is made to handle too much chaff while looking for the grain.

The years of his apprenticeship have been lengthened to four, yet he does not get value received, as we count years to-day, for this long period, a period not too long if filled with efforts wisely and well directed.

Frank and justifiable criticism is being made regarding the so-called art of teaching in the public schools.

A noted instructor in this state, a college president, speaking of ten weeks being required in the public schools in which to teach decimal fractions, said: "I will guarantee to take any average child and teach him decimal fractions, and teach it as well as he will ever need to know it, in one hour."

He further said: "There is a foolish notion among teachers that education must proceed very slowly in order to be thorough; quite the opposite is true."

I quote once more: "The work in the eight grades can be done better in six grades than it is done to-day, by the simple application of psychological methods to all grades of work. Those two years are worth a thousand dollars to every child who goes on to a higher education and professional work."

If two years saved to the child means a thousand dollars, how priceless will be the future methods in education to the medical student who to-day, in the full flush of his money earning power, does not begin to receive from primary to professional school, an adequate return in better brain storage and brain equipment, to anywhere near pay for the outlay in wear and tear and money.

The application of "psychological principles and better pedagogical methods" will relieve this tax and make easy that which is now attended with fatigue to a brain limited in its workings by inferior methods of education.

The problem is not an easy one, but there is a call for its consideration. It calls for careful investigation and study on the part of the Committee on Education of the American Medical Association. It calls for recommendations and suggestions from specialists in reform pedagogic work.

As to teachers and books in the medical schools, the reforms needed are too self-evident to receive much attention.

There should be a demand that only those instructors shall have places in our schools who have a fitness, a talent, yes, a genius for placing and fixing ideas in the student mind.

Not blood alone, nor favoritism nor pull should count; if backed by no better qualifications these should bar out.

Only those text-books should be used in which words crystalize ideas; in which illustration instantly fixes a mental conception. Illustration should be at a maxi-

mum, for ten strokes of the illustrating pencil are worth a hundred strokes of the descriptive pen.

For the medical practitioner there is a crying need for reform in books, journals and theses pertaining to his craft.

The life of the busy physician is being wasted prodigally when groping through cloudy pages to catch a single idea, or when listening to a mass of verbiage in an essay, trying to catch a practical suggestion.

The hour demands thought which is clear and to the point, whether coming from page or tongue.

A live thought flashes; it does not smoulder. Diagram and illustration enhance its value and bring back quick results.

Where there is a lack of these, where there is no system, no pre-arranged program for each year's work, there we will find county medical society life flickering.

A society that leads a tramp, "hand to mouth," existence, satisfies no ambition, gives no inspiration to post-graduate work, kills unity and fraternalism.

With work laid out, and wheels turning, unity and interest need no fostering care,—many of our societies are proving this to-day.

As to the public, what is due from us to it in these so-called days of enlightenment?

For the physician to fail, as he has in the past, in teaching preventive medicine, is as criminal as withholding from it curative medicine. In sanitation, in hygiene, and in all matters medical, we are our brother's keeper theoretically. Practically so far, we have sadly missed our calling.

What little knowledge of these subjects the public has acquired is not useful. It has come to it largely from limited, garbled, and imperfect statements in the lay press.

Some knowledge has come to it from boards of health, necessarily given arbitrarily, after disease had entered the home, rather than before.

Then there is a widespread belief still obtaining largely among the people, that the scourge of preventable diseases in their origin, is not human but divine. So also as to the origin of Christian Science and other allied frauds which have been a menace to public health.

This is an error self-evident to the physician, but not to the general public.

It is therefore the imperative duty of the physician to systematically and periodically instruct and enlighten the public, in public, on all matters pertaining to the prevention of disease, the conservation of life and health, and the exposure of all sorts of quackery and frauds which are a menace to the people.

Too many of our societies are languidly considering. It is time to act.

Whatever we give to the public will be returned many fold in effective allied work for needed medical and health reforms.

Leaving here the questions which deal more with materialism in student training and equipment, in society work and endeavor, in the enlightenment and education of the public, we come to the consideration of those betterments which make for nobility and honor in medical societies and members.

We are coming face to face with factors which have worked and are working in our professional life to-day, which, rightly dealt with, will bring to us strength, self-respect, and honor, but which, yielded to submissively, will bring slavishness, mutual distrust and decadence.

In medical society life there is a call to the higher planes, not only to those who have already adopted high ideals, but to those who have the desire to honor their high calling rather than sell it, like Esau his birthright, for a mess of pottage.

It is not a time to criticize the unessentials in our fellows. It is not a time for

looking for stain or spot on our brother's garments when we know full well that our own are not immaculate.

It is not the time, when membership is sought in our societies, for petty jealousies or fancied slights to rule the hand that holds the black ball. A black ball can be merciless as a musket ball. The smaller things of life never call for its use. Keep it for the gross breach in morals or ethics and even then deal with a man with such justice and kindness as may in time make him a better and more worthy man.

Paradoxically speaking, there are more ways of elevating a man than by knocking him down.

In everything we should remember that we belong to God's noblest profession, where we look for that honor which rebukes dishonor openly; for that justice which shows the scales at a balance; for that right which fearlessly smites wrong; for that mercy which tries to lift up the feeble and the weak.

In some societies retrospection and introspection will call to mind members who have been guilty of every sin and shortcoming which have been laid at the door of any man, who has ever at any time, sought admission to their fellowship; yet the time often comes when to such members respect is shown and even honors are given.

Sins of omission or commission are common to all.

As we need charity, so let us give it.

But here let it be said that charity has no call to shield two classes of men that bring reproach upon their profession: one, the abortionist found within our gates who is often a degenerate; the other, the slave of alcohol, opium, and cocaine. Both should be driven beyond the outer walls until such time as they are fit, if ever, to practice their sacred calling.

Of the latter class, the number is appalling when we think of the human lives that are entrusted to their care.

In one small town, not one hundred miles away, four physicians until recently, served the community of six hundred. Of these four, three were confirmed drug habitues.

Such conditions should call from us the strongest condemnation and the earnest support of proposed legislation looking to the revocation of licenses in such cases.

Barring such perverts, we must, in order to be effective in our medical organizations, depend not only upon the good men in the profession, but upon the indifferently good and those not hopelessly bad.

During the War of the Rebellion, the Union was not preserved by the highly moral, or the highly religious, or the highly anything else. It was preserved by the people of all grades, who were fired with one consuming idea: "The Union must and shall be preserved." Differences were sunk.

Suppose a man does not come up to the ideal standard of which we boast. If we can't do such a man some good by admitting him to our ranks, we are not up to that standard ourselves. If we can't raise him to a higher plane, it is because we are not on that plane ourselves; we are not occupying the point of vantage.

Since there is good in every man, let us use a telescope when looking for the best in him. Leave to the microscope the discovery of the worst.

Today, two subjects come before us which assail our professional standing and self-respect.

In a broad way, one deals with ethics—a word of Greek origin meaning "custom" or "usage," but which means in our profession, an elaboration of the "Golden Rule."

The subject referred to is "Contract Practice," or the "Lodge Practice Evil," as it is sometimes called.

The most active agent in its promotion today, I believe, is the order of "Eagles."

It is doing injury to the medical profession. It is attempting to lower its high standards.

Recently a physician in another part of the state, who had taken up this work, and so had placed himself at variance with his county society, wrote to your Executive, asking whether he could hold his membership in the State Society and the American Medical Association, and still continue to do contract work. The reply expressed, perhaps, something of what should be said, and was in part, as follows:

"Do not look at the question in the light of what you can do or cannot do, and still retain your membership.

"There is a far more important question to be considered and settled than that of eligibility to membership in either State or National society, viz:—"What is the right and fair thing to do in order to do what is best for my patients, my professional brothers, and myself?

"Your patients should receive the best you can give, nothing less.

"Your professional brothers look for the best in you, and are pleased when they see it.

"Your professional honor and self-respect should always keep you at your best.

"Such work as you outline in your relations to the "Eagles" will never produce such results.

"The cost of acquiring a medical education is very great, as you know.

"The medical profession cannot stand for dollar physical examinations for insurance companies, and for cheap wholesale care of families for fraternal and other orders.

"Scant pay gives rise to scant service; that means the sick will not get the best medical service to which they are entitled. It means the physician will not give honest service because it will not be his best, as his best is not being paid for.

"The whole business leads to irritation on the part of the patient; fosters slipshod and dishonest methods on the part of the physician, and takes from him the respect of his brothers in the profession.

"Do not forget that the friendship of your professional brother is priceless. Do not forfeit it. Do not lose it for all else the world can give.

"The best, the closest, the dearest friends on earth, barring your own immediate family, should be those of your own professional household. Do not lose your grip on them."

The other subject which is doing wrong and injustice to the medical profession is: The lowering of life insurance fees for medical examinations, which has been put in force by many companies. Why should this be?

The world has never seen such equipment in medicine as it sees today. Such equipment, which fifty years ago only required six months at medical schools, now requires thirty-six; not double the time only, but the time multiplied by six.

What does this mean? It means for one thing, far better service given by medical examiners to the life insurance companies; it means that medical men are furnishing safer investments in the way of safer risks, to these insurance companies.

What reward does the physician get for this better service arising from these thirty months—virtually three years—of extra study and work?

What is his reward for giving one thousand days more of his life than formerly in unremunerative toil that he may serve humanity better? One thousand days during which he earns no money, receives no income? one thousand days during which his slender purse is emptied and, in many cases, has to be replenished by dealing, as it were, in "futures"—borrowing money to complete his course?

All this these insurance companies reward by cutting his fee.

What shamelessness, to virtually say: "Because you have worked longer and harder to give us better service, we wish to reward (?) you by diminishing the earnings to which you are honestly entitled." What injustice!

Why should there even be graded fees?

An insurance company calls for and expects a thorough, complete, honest examination, whether the amount of insurance applied for is one thousand dollars, or one hundred thousand dollars.

Are the questions to be answered more fully in one instance than in the other?

Is there one whit more information called for in one case than in the other?

Are the lungs of an applicant for a policy of one thousand dollars more easy of percussion and auscultation than those of the one applying for one hundred thousand dollars?

Is the examiner's hearing supposed to be less acute in listening for a heart murmur when the insurance asked for is one thousand dollars than when it is one hundred thousand dollars?

The logical inference to be drawn from the graded fee is this: "We, the Company, are asking for exactly the same information whether the amount of insurance is large or small, yet we distrust your honesty, therefore we will pay you for being really honest in your examinations when the larger insurance is asked for."

Is this satisfying to your sense of honor and justice? No. Here, as in the "Contract Practice" work, commercialism deals in our services at the bargain counter, and the pawn shop.

This does not make for our uplift.

Unionism can teach us much today. It has lifted the man of few dollars and little education to a place where even scant service and poor labor can commend its price.

This the expert services and skilled labor of the physician are largely failing to do.

A betterment in conditions will come to the profession only through practical unity and a working idealism.

This oft repeated insistent note must still be sounded till we come to look upon the greater things, in a great profession, in a larger way; till the small things and the unessentials are lost sight of, by our working unitedly and as a whole for our common interests, and for our common good.

Harmony in feeling and co-ordination in action under a united profession, mean power, mean life, mean success, mean the elevation of the physician to the place where it was ever meant he should stand, the first and highest place among the sons of men.

THE METRIC SYSTEM

The advantages of the metric system over the present less convenient and accurate measurements used in medical prescribing are pointed out by W. A. Jolley, Boulder, Colo., who also gives details of methods to convert the measures now in use to the metric measurements. The convenience of the system is shown by a number of practical examples. He also gives a table by which the tablet triturates in common use can be prescribed according to the metric nomenclature, and show how to use this system in prescribing ointments and liquids. One advantage of the system is the facility with which it can be adapted to the dosage required for children. Consider as 20 age of an adult and use that age as the denominator and the child's age as the numerator. Let the dosage for an adult be the total required in a mixture, containing 100 c.c., then allowing 5 c.c. for a teaspoonful, this will be the dose for a child 1 year old. For a child 2 years old twice as much and so on up to the adult. Actual practical work with the adaptation of the common measures to the metric equivalents will soon produce familiarity with prescribing by this method.—*Jour. A. M. A., May* 18.

THE VENTILATION OF SCHOOL BUILDINGS*

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It is extremely gratifying to note the interest which the members of the medical profession have taken and are taking in the subject of school hygiene, and your society is deserving of much praise for having set apart and made public this meeting for the consideration of one of the most important questions which come within the scope of preventive medicine.

The subject assigned to me by your committee is one of special interest, both to myself and to the department which I represent. It should be of equal interest to those who have charge of the educational institutions of our land, and to the parents of those who, for the common weal, are required to pass a very considerable portion of their youth in such institutions.

That the activities of the mind are, as a rule, impaired by a morbid condition of the body, and that anything which tends to a deterioration of the physical forces in the young is a handicap to education, are truths too well known and understood by the members of your profession to require even a passing comment.

Among the many causes which contribute to sickness among school children, it is believed that the school building and its management play a very important part. I will refer to this phase of the subject later in the paper.

Notwithstanding that the subject of school hygiene has been widely and repeatedly discussed, practically from every standpoint, and numberless standards laid down for the proper sanitary construction and care of school buildings, the fact remains that in a large proportion of such buildings the requirements for good sanitation are woefully lacking in some one or more particulars, notably in respect to good ventilation. This brings us to the question as to what is comprehended by the term good ventilation.

In an occupied room, an approximation of the purity of normal outdoor air cannot easily be secured, nor maintained, without discomfort to the occupants, and a standard of permissible impurity has been adopted as the unit of ventilation. In normal air, the amount of carbon dioxide is slightly more than three parts in ten thousand, and this amount is nearly uniform in every quarter of the globe. But when a portion of this air is, so to speak, bottled up within an occupied room, by the process of respiration, the oxygen in the air is gradually used up in the oxygenation of the blood, and the products of this purifying process—principally carbon dioxide and water—are thrown off from the lungs. If a sufficient amount of fresh air is constantly passing through the room to dilute the products of respiration, so that the added carbon dioxide does not exceed three or four parts in ten thousand of air, and the change of air is accomplished without discomfort to the occupants of the room, the ventilation is said to be good. Any excess of carbon dioxide over six or seven parts in ten thousand of air is, therefore, an indication that the air is unfit for respira-

*Read before the Ingham County Medical Society, at Lansing, January 10, 1907.

tion, and ten parts will render the air distinctly harmful.

The amount of fresh air necessary to secure the proper dilution of the carbon dioxide in the air of a school room has been fixed at not less than 1,800 cubic feet per hour for each pupil; and for the proper distribution of this amount of air throughout the room at least 15 square feet of floor space and 200 cubic feet of air space for each pupil are necessary.

The several standards I have enumerated have been determined by careful experiment and calculation, and are accepted and used by sanitarians and others directly interested in the ventilation of school buildings, as the measure of the ventilation in such buildings. It should be remembered, however, that the amounts specified are minimum amounts, and that larger amounts of floor and air space, and a larger volume of fresh air, for each pupil, are desirable.

The intimate relation existing between the amount of air space and the volume of fresh air necessary for each pupil will be understood by a simple illustration. In a school room twenty-five feet long, twenty feet wide and twelve feet high, we have totals of five hundred square feet of floor space and six thousand cubic feet of air space, and such a room will afford the minimum amounts of floor and air space for thirty pupils. As each pupil will require at least 1,800 cubic feet of fresh air per hour, thirty pupils will require 54,000 cubic feet, and dividing this amount by the cubic, or air, space of the room (6,000), we have nine as the quotient. This means that the air of the room must be changed nine times in each hour, or about once in every seven minutes. If the number of pupils in this room be increased above the number for which it and the ventilation were designed, it follows that one of two things will result, the pupils will not have the requisite amount of fresh air, or, providing the ventilating apparatus is equal to the demand,—which is not often the case—a greater amount of air will have to be forced through the room in a given time, to the probable discomfort of the pupils.

Having determined upon the number of pupils who may properly occupy a given room, and the number of times the air of the room must be changed to insure the required amount of fresh air for each pupil in a given time, the next question for our consideration is the method, or methods, by which this change of air may be effected. In passing, it should be stated that in the consideration of any plan for the proper ventilation of a building, no account should be taken of the changes of air which may be secured by the opening of doors, windows or transoms, and any building which depends, wholly or partly, for its ventilation upon such openings is not well ventilated. It should also be stated that, as the heating and ventilation of a building are, as a rule, inseparable, our consideration of the methods of ventilation will include also a consideration of the methods of heating.

The ventilation of school buildings is usually accomplished by the so-called natural method, in which air from outdoors is taken, or admitted, into basement rooms, heated by means of a furnace, or steam coils or radiators, and conducted from thence, by flues, into the rooms above, the vitiated air being removed, by another set of flues, to the outer air above the roof, or, as is sometimes the case in badly planned buildings, to the attic. In this method of ventilation the movement of air is due, principally, to the difference in the weight of two columns of air of equal size but of different temperatures; and the greater this difference the more rapid will be the movement of the air. As the temperature of the air in a vent flue will remain nearly constant, it follows that with varying temperatures of

the air outdoors, the velocity of air in the flues will be subject to wide variations. For this reason, in planning the ventilation of a building by this method, it is necessary to construct the flues large enough to do the work required of them when the difference between the temperatures of the indoor and outdoor air is not greater than say twenty-five degrees, and to provide for a regulation of the draft in the flues in the coldest weather, in case the movement of air in the rooms should prove to be too rapid for comfort.

In large buildings, and in any building where a large number of pupils congregate in one room, the natural method of ventilation cannot be relied upon, and recourse must be had to a fan, or fans, for forcing air into and out of the rooms.

I will now consider, briefly, some of the details upon which much of the safety and success of the ventilation of any building depends. The air supply should, in every case, be from outdoors, and never from basement rooms, unless they are specially prepared and set apart for that purpose; neither should the vitiated air of the rooms, as in some systems, be conducted downward to the basement and re-warmed and discharged back into the rooms. The location of the fresh air openings should be made with due regard to their isolation from possible sources of contamination. They should never be on a level with the ground outside, because they would thus become receptacles for dust, possibly infected, and might, and if located in a sidewalk would, at certain times, become receptacles for the sputa of passers-by, some of whom might be suffering from pulmonary troubles. From the fresh air openings in the outer walls, the fresh air should be conducted to the heating apparatus in air-tight metallic tubes, or ducts, or collected in fresh air rooms in which the air is to be warmed, and which are usually adjacent to the outside walls. The fresh air rooms should be well lighted; have screened openings to the outer air; smooth and impervious walls, ceilings and floors; tight fitting doors; and be accessible only to the person in charge of the heating apparatus. Common sense would dictate that such rooms should not be used for storage purposes, nevertheless it is not uncommon to find in such rooms an accumulation of truck of all kinds that would prove a veritable harvest for a junk dealer.

The method of warming the fresh air will have much to do with the healthfulness of a school building, and should receive the most careful consideration It is gratifying to note that the once popular method of heating school buildings by means of furnaces is giving way to the more hygienic method of heating by steam. The passing of air over the excessively hot, and sometimes red hot, surfaces of a furnace, by which it is burned, and deprived of a large percentage of the contained moisture, has been declared by a prominent medical practitioner, who is also a recognized authority on school hygiene, to be "a most active cause of nervous diseases and diseases of the nose, throat and lungs." To this I would add that, in the event of defects in the heating surfaces of a furnace, which must sooner or later occur, or in case the heating surfaces are heated to redness, there would be a strong probability of the contamination of the air supply by poisonous furnace gases.

Where steam heating is used, whenever possible, the heating stacks should be in a fresh air room, such as I have already outlined, and not, as is often the custom, in boxed enclosures in some dark or out of the way place in the basement, where they, together with the ducts communicating with them, may remain undisturbed for years as collectors of dust and the homes of vermin.

The use of wooden ducts, particularly in basement rooms, for the conveyance of fresh air to or from the heating apparatus, is very objectionable, because the inevitable shrinkage of the wood will sooner or later form openings sufficiently large for the passage into the ducts of air from undesirable sources.

The ventilating flues should never be on outside walls, because the air in them would be cooled down, in some cases to the point of stopping, or even reversing, the air currents.

Registers for the supply of fresh air and the removal of vitiated air should, as a rule, both be on the same side of a room, and located, as nearly as possible, opposite to the most exposed wall of the room, or to the side having the largest amount of glass surface.

The registers for the supply of fresh air should be in the walls, about six or seven feet above the floors. They should never be in the floors, because they would thus become receptacles for dust, and possibly sputa.

The vent registers should be in the walls, at the floor levels. They are sometimes placed in outside walls for the purpose of preventing air which has been cooled by contact with the walls or windows from spreading across the floors. Such a location of the vent registers is objectionable, because it allows the fresh air to pass out of the room before it has made the circuit of the room, and leaves a comparatively dead air space in that part of the room nearest to the fresh air opening. Were it desirable to remove the vitiated air by registers on the coldest sides of the rooms, there would be serious difficulties in the way of its accomplishment. The flues to which the registers were attached could not be carried, vertically, on or in the outside walls, because the air in them would have little or no movement, and there would probably be a down draft in the very cold weather. Further, if the joists were laid parallel to the walls in which the registers were to be placed, it would not be possible, without the use of furring strips, to conduct the vitiated air under the floors to flues on inside walls. Further, if the joists were laid at right angles to the walls in question, and ducts, connecting the registers with the flues on inside walls, could be constructed between the joists, the two square turns which the air would have to make in each duct, together with the distance the air would have to travel horizontally, would tend to a sluggish flow of air in the ducts and flues.

If the air entering a room is of the proper temperature, and its distribution throughout the room sufficiently rapid, the cooling effect of the outer walls and windows will not, ordinarily, be perceptible to the lower extremities of the occupants. In rooms having considerable exposure, or very large windows, it would be well to place steam coils, or radiators, on the most exposed sides of the rooms.

In preparing the plans for a school building, the mistake is very frequently made of providing ventilating flues of the same area for rooms of the same size, but on different floors. That this is a wrong method, I will endeavor to show.

With a difference between the temperatures of the indoor and outdoor air of twenty-five degrees, a flue forty feet high, for the ventilation of a room on the first floor, will remove about 20,520 cubic feet of air per hour for each square foot of flue area; a flue thirty feet high, about 17,820 cubic feet; and a flue twenty feet high, about 14,520 cubic feet. (In each of these estimates allowance has been made for friction.) In the case of two schoolrooms, of corresponding size, and one of which is located immediately over the other, if the vent flues of both rooms have the same area, and

the vent flue from the lower room is capable of securing the proper movement of air for thirty pupils, the vent flue of the upper room will provide ventilation for but twenty pupils, or thereabouts.

In general, the velocity of air in vent flues on the first floor should be about five feet per second, and on the second floor, about four feet per second; and for thirty pupils in a room, the vent flues of the first floor rooms would require sectional areas of about three square feet, and for the second floor rooms, about four square feet. In the case of the fresh air flues, the rule is reversed, the flues of the first floor rooms must be proportionately larger than those supplying the rooms on the second floor. The registers should, in every case, be about one-third larger than the flues to which they are connected.

For the reason that the ventilation of a building may be interfered with, in some instances very considerably, by adverse conditions of the weather, the provision of a few square feet of steam coils, or radiation, in each vent flue would be a wise provision.

With the exception of those ventilating plants where the air is moved by means of a pressure fan, and in the Smead system, there is seldom any special provision made for the regulation of the temperature of the air in school-rooms. One day the room may be too warm for comfort, and the next day, with a fall in the temperature outdoors, the temperature may be just right, or too low. Again, upon the assembling of the pupils at the beginning of any session the temperature may be quite comfortable, but after the room has been occupied for some time, there will be a sensible, and probably uncomfortable rise in the temperature, and the teacher will do just what any other person would do under similar circumstances—open the windows, and by so doing, probably and unintentionally give one or more of the children a good start on the way to a spell of sickness.

Where the rooms are heated entirely by warmed air, the temperature should not be lowered by closing, or partly closing, the fresh air registers, because, in so doing, the air supply would be diminished, or cut off entirely. Dampers for the mixing of warm and cold air should be provided at the base of each warm air flue, and they should be under the control of the teacher in each room.

Where the rooms are heated partly by warmed air and partly by direct heating coils, or radiators, the temperature may usually be controlled by the direct radiation.

This is a phase of my subject which, if the time at my disposal permitted, I should like to consider at greater length, because school-rooms too often partake of the nature of drying rooms.

For the benefit of those who may not be familiar with the Smead system of ventilation, in which the so-called dry closets form a part of the ventilating apparatus, I will give a brief description of the system. The fresh air is conducted, through basement rooms set apart for the purpose, to furnaces, and from thence to the rooms in brick flues. It is intended that the vitiated air shall pass out of the rooms, through registers in one or more walls, downward into the spaces beneath the floors, and from thence, in large brick flues, downward to the basement, through the closets, and, finally, into large vertical flues, extended to the roof, and in which fires are supposed to be kept burning continuously. If the system is properly installed, and kept in good working order, there will probably be a movement of air, more or less sufficient, in the direction intended. *But,* if the fires in the main vent flues are allowed to go out, or the weather conditions are adverse to good ventilation, there will be a strong

probability of a sluggish movement of air in the rooms, and, in many instances, a reversal of the air currents, by which air which has been in contact with the closets will be discharged into the rooms. Another factor which is constantly operating against the free movement of air in rooms ventilated by means of this system is the friction due to changes in the direction of the air currents. It has been determined that the velocity of the air current in a duct, or flue, will be diminished one-half, or nearly so, in making a square turn. To this should be added the friction due to the contact of the air with the sides of the duct, or flue, which will vary according to the smoothness or roughness of the materials of which they are constructed, or with which they are lined. In the Smead system, the air in passing from a room to the main vent flue makes at least four square turns, and numberless smaller turns in worming its way over and between the joists, and comes in contact with many rough surfaces in its passage.

It is contrary to nature for air of the temperature usually found in school rooms to pass downward, as in the Smead system, unless it is, so to speak, pulled down, and the moment the pulling force is weakened the tendency of the air in the vertical flues connecting the rooms with the closets will be to rise, and flow back into the rooms. That this is what has occurred, and that quite frequently, in schools equipped with this system, is a matter of history, and has resulted in the wholesale condemnation and widespread disuse of the system many years ago. Lansing is one of the few cities which have not yet discarded this dangerous method of ventilating the public schools.

But the principal danger from the Smead system lies not so much in the stagnation of air in the rooms, or even in the backflow, into the rooms, of foul or noxious air, as in the possibility of the distribution of infection throughout the building in which it is used, and the infection of the outdoor atmosphere in the vicinity of the school building. In this connection I wish to quote, briefly, from the writings of two or three authorities, the names of most of whom are well known to the people of this State:

Doctors J. H. Kellogg and John Avery, a committee of the Michigan State Board of Health, who made a careful investigation of the Smead system, as insalled at Detroit and Toledo, stated that

"In the light of the most recent researches, the drying of fecal matters, which is supposed to occur in the dry vault, does not destroy the germs of disease which may be contained in them; and the scattering of these germs, through their discharge into the open air, may be conducive to the wide dispersion of the infectious elements of diphtheria, typhoid fever, and possibly other grave maladies. The danger would, of course, be greatly aggravated in times of epidemics of any of these diseases."

Doctor V. C. Vaughan, Dean of the Medical Department of the University of Michigan, and the present president of the Michigan State Board of Health, has stated his objections to the Smead system to be briefly as follows:

"The continuous and uninterrupted flow of air in a schoolroom is impossible. Doors must be opened and counter currents will be established. Such currents, even when they exist only momentarily, coming over dried fecal matter, will be likely to convey minute particles with them.

"By drying the fecal matter in the building, any germs that may be present are placed in the most favorable condition possible for distribution through the air.

"Germs are living organisms and you cannot dilute them any more than you can dilute a horse or a rose bush.

"No one would want his children to attend a school if there should be the corpse of one dead from diphtheria in the cellar. No one should want his child to attend school when there is a room in the cellar filled with feces, which are

liable to be filled with the germs of typhoid fever or other diseases."

M. A. Veeder, M. D., of Lyons, N. Y., a well-known authority on matters pertaining to the subject of Preventive Medicine, writing to the Michigan Department of Health, says:

"We have been having an experience with diphtheria since the opening of Lyons Union school, that appears to indicate that the vaults in the cellar of the building containing excrement dried by air from the rooms in accordance with what is known as the Smead system may become the source of infection. The material which these vaults contain would seem to become a veritable culture medium for the bacillus of diphtheria, the vapors given off containing its spores or toxins the same as sewer air. In case that the ventilating fires go down, these vapors have ready access to every room in the building. * * * At Rochester, N. Y., diphtheria has been endemic for years, and at times large numbers of cases have been traced, as I am informed, to schools having the Smead system."

Referring back to the subject of the influence which school buildings and their management exert upon the health of the occupants, it is probable that the present unsatisfactory and dangerous condition of many school buildings will continue until reliable statistics can be produced which will establish a connection between certain diseases and unsanitary conditions in the school buildings where the diseases may be contracted. An instance of the necessity for such statistics was recently brought to my notice by a letter in a local paper in which the writer, speaking of the Smead system, made the statement that he believed the health of the pupils in schools where this system is in use will compare well with that of those in schools having other systems of heating. In the absence of statistics relative to the comparative health of the pupils in schools heated and ventilated by different methods, a comparison of the health of the pupils in a Smead school building with that of the pupils in a school insufficiently or improperly ventilated by some other method, would be manifestly unfair.

The medical inspection of schools, as carried out in many of the large cities, is a valuable aid in the restriction and prevention of the dangerous diseases, and by it physical defects in the children are often discovered and remedial measures suggested, but it is confined principally to diseases of a communicable nature, and does not, usually, comprehend the conditions which affect the general health of the pupils.

The nearest approach to a model plan for the inspection of the public schools, which I have in mind, may be found in the city of Philadelphia, Pa., where the medical inspection of the pupils is supplemented by semi-annual inspections of the school buildings, with special reference to overcrowding, temperature, methods of heating, illuminating and cleanliness of the rooms; the general arrangement and ventilation of the coat rooms; the cleanliness, lighting and ventilation of the cellars; sources and purity of the drinking water; toilet accommodation; the size and condition of the playgrounds; and the nature and quality of cakes, candies and fruits sold in stores adjacent to the school buildings. The reports of these inspections are handed to the boards of education for their consideration.

To the records of the medical inspections, both of the pupils and school buildings, I would suggest the addition of records of careful observations, by the teachers in every school room, relative to the general health of the pupils; and in making this suggestion I am aware that it would not always be an easy matter for a teacher to ascertain the nature of the various ailments which might keep children out of school, but it should not be very difficult for a teacher to keep a brief record of each

such absence, and, whenever possible, the nature of the sickness, together with observations as to the mental activity and cheerfulness of the scholars generally.

Except in times of epidemics of dangerous diseases, a comparison of the sickness in the several schools of a large city would probably afford an indication of the comparative healthfulness of the several school buildings, and assist in the location of unhealthful conditions.

A careful study of morbidity statistics, such as have been suggested, in conjunction with the results of reliable tests relative to the heating, ventilation, sewerage, etc., of any school building would, I believe, furnish a valuable contribution to the study of the causation of diseases, and constitute a powerful argument for better hygienic conditions in our schools.

The necessity for legislation, relative to the sanitary requirements of school buildings, is indicated by the fact that thirty-three states have legislated upon almost every phase of school hygiene, and known conditions in many of the schools in this State serve to emphasize the necessity for better and more uniform methods of heating and ventilating, which could best be secured by preventive legislation.

In the State of New York, the following law has been enacted for the proper ventilation of school buildings:

"Sec. 1. No school house shall hereafter be erected in any city of the third class or in any incorporated village or school district of this state, and no addition to a school building in any such place shall hereafter be erected the cost of which shall exceed five hundred dollars, until the plans and specifications for the same shall have been submitted to the commissioner of education and his approval endorsed thereon. Such plans and specifications shall show in detail the ventilation, heating and lighting of such buildings. Such commissioner of education shall not approve any plans for the erection of any school building or addition thereto unless the same shall provide at least fifteen square feet of floor space and two hundred cubic feet of air space for each pupil to be recommended in each study or recitation room therein, and no such plans shall be approved by him unless provision is made therein for assuring at least thirty cubic feet of pure air every minute per pupil, and the facilities for exhausting the foul or vitiated air therein shall be positive and independent of atmospheric changes."

Somewhat similar provisions are contained in the State law of Pennsylvania relative to the ventilation of schools in that state.

As showing what would be the probable result of a systematic inspection of the ventilation of the school buildings of this state, I would refer, briefly, to the results of investigations of this nature in our sister States of Ohio and Indiana.

In an investigation by the State Board of Health of Ohio, relative to the ventilation of school buildings in that state, exclusive of those in Cleveland and Cincinnati, there were found 1,235 schoolrooms (over twenty-one per cent) in which each pupil had less than the minimum amount of floor space, and 677 schoolrooms, outside of the city schools, in which each pupil had less than the minimum amount of air space.

In a similar investigation by the State Board of Health of Indiana, it was found that thirty-seven per cent of the schoolrooms were imperfectly ventilated; sixty per cent badly ventilated; and none well ventilated. It was estimated that 450,000 pupils in the schools of that state were obliged to breathe bad air during the time they were in school; that eighty per cent of the pupils suffered from colds or coughs in a single term; and that ninety per cent of these ailments were due to breathing bad air. It was further stated that, as twenty per cent of all deaths from consumption in that state are in the age period of 15 to 25 years, the probability that the lungs of

the decedents were prepared for the consumptive germ by breathing bad air at school is very great. (In Michigan, about twenty-five per cent of all deaths from tuberculosis occur in this period.)

In conclusion, I wish to state that the failure of many ventilating plants to do the work they are expected to do may be charged to the ignorance or carelessness of the janitors, or other persons in charge of the plants.

For the intelligent working of the ventilating apparatus of school buildings, it would be well if all connected with the management of such buildings —the members of the school boards, the superintendents, the principals, the teachers and the janitors—were given an object lesson in the general principles of good ventilation, and in the workings of the ventilating apparatus in their particular building. Some of them would then be in a position to know whether or not the plant was being properly managed.

Discussion.

Dr. Clara M. Davis, Lansing: In discussing from the point of view of a physician the subject so ably handled by Mr. Ainge, I shall make use of very few statistics, and of none regarding capacity of vents and of flues, their proper proportions for rooms of various sizes, etc. These details belong to the province of the sanitary engineer.

But it seems to me that physicians who are properly interested in the health of the community should be alive to their duty in impressing the public with the need of adequate school ventilation by showing the far-reaching evil consequences of defective ventilation on the proper development of school children, and its importance as a predisposing factor in the acquirement of respiratory and spread of contagious disease; and that they should so familiarize themselves with the *general principles* governing ventilation of large buildings and the special points in the problem of school ventilation, as to enable them to be fairly intelligent critics of such systems as it may be proposed from time to time to install.

Ventilation of schools has always been more or less of a bugbear question, and we probably practise self-deception and accept the will for the deed more often with regard to this than with regard to any one other sanitary feature of our schools.

A system is put in with little investigation as to its real merits, mentioned with pride when the building is dedicated, and very slight concern shown afterwards as to whether it works well or ill, or even works at all. This is true of hospitals as well as schools, and in more than one the speaker has seen elaborate systems of registers for ventilation marked, "Open in summer," "Open in winter," etc., but which no one opened or closed from one year's end to another.

The public has learned that cheap, shoddy plumbing is, in the end, expensive, and a nuisance. School boards are thoroughly alive to the fact that school buildings must be well lighted and heated and that for proper plumbing, lighting and heating, three things are requisite:

1. A substantial outlay at the outset to cover installation cost; 2. A fund for running expenses that will provide for prompt and efficient repairs when needed; 3. A certain amount of care.

But with all out-of-doors full of fresh air, money comes grudgingly for ventilation and its maintenance, and the temptation is to economize here where no show is made, and spend the money where the passing tax-payer may see it. Failure to meet some of the three requisites above mentioned, seems to me to account for the dissatisfaction with many of the systems of ventilation in use, especially the third item, "a certain amount of intelligent care." We do not expect heating, plumbing, etc., to run themselves,—why ventilation? Yet we demand often of this feature absolute automatism in all kinds of weather and under every condition.

It may be well at this point to go over a few of the conditions of the ventilation problem which are more or less peculiar to school buildings, viz.:

1. Rooms of approximately the same size and accomodating from thirty to fifty pupils. 2. To be occupied six hours in a day, five days a week, or thirty hours per week. 3. Buildings to be used the nine coldest months in the year with variations in out-door temperature of from 0° to

95° F., and with a velocity of almost nothing up to fifty miles an hour. 4. Buildings to be used in atmospheric conditions of extreme dryness and of moisture, amounting to saturation. 5. Since pupils are assigned seats and not allowed to change them, ventilation must be secured without opening of doors and windows, which would cause drafts, i. e., must be artificial.

Now the ventilation problem is, as Mr. Ainge has made clear, impossible of complete divorce from the heating problem, and the expense of providing fresh air at a proper temperature is largely the expense of heating it. Considering this, and the five conditions above mentioned, what, then, are the principles to guide in selecting a system and what systems at the present time best meet them?

1. Rooms should be ample in size for the number of pupils, so that in the very warmest weather, fair ventilation by means of windows and doors (i. e., without expense of heat) may be easily maintained, and in cold weather the air may not require too many complete changes per hour to be pleasant.

2. Since school rooms are occupied by their usual number of occupants but thirty hours out of the one hundred and sixty-eight in the week, or not quite one-fifth of the time, for reasons of economy, the greatest possible independence of heat and ventilation is desirable; since heat must be kept up the entire time and to the same degree, for as much of the time as any one remains in the building, while ventilation is needed only in school hours.

3. Ideal ventilation should furnish fresh air neither cold enough to produce chilly drafts nor so hot that it is "burned;" but at a temperature between 60° and 80° F., another requirement best met by some independence of ventilation and heating.

As to how the different systems meet these requirements:

1. Various Gravity Systems.—With these, as Mr. Ainge has shown, since they depend on differences in temperature for the circulation of air, where there is no heat in the building, there is no ventilation. Little heat, little ventilation. And their efficiency is so influenced by outside temperature and atmospheric conditions of wind velocity and moisture, that they may be efficient a half, a third, nearly all, or none of the time. Their attractiveness lies partly in their low initial cost and expense of maintenance, partly because they are the most automatic and require least attention.

2. Indirect Heating With Fans.—These systems, as Mr. Ainge described them, are vastly better, and give, when properly installed, adequate ventilation. They are not ideal in that in the coldest weather the air, since it is used for heating as well as ventilating, must be very hot, and the fans must be run all the time the building is heated; i. e., one hundred and sixty-eight hours in the week, when ventilation is needed but thirty hours.

3. Direct Heat by Radiators and Ventilation by Fans.—In this method, fans blow in air heated in steam coils in the basement to 60° or 70°. The fans are used only when the building is occupied, thus making it a much more economical system than the preceding; while the independence of heat and ventilation permit the placing of radiators along the outside walls, so that rooms are more evenly heated. Also the fresh air furnished is not superheated. The speaker is informed that this system is in use and giving great satisfaction in the new Engineering Building in Ann Arbor.

In conclusion, a plea for a more rational and systematic way of conducting the erection of school buildings seems to the speaker to be of greatest importance, and in this connection, the Reports of the Boston School Commission for the years 1901-1906, will be found most instructive. After a tour of careful investigation of public school buildings in all the principal cities of the United States, and the accumulation of a vast amount of data, bearing on the especial features of such buildings, they have arrived at a basis of cost per cubic foot, which they figure at twenty-two cents, including all fixtures, grading, etc., and a cost per pupil to be accomodated ranging from $130.00 to $175.00, according as the building have many or few rooms. Of this cubic foot cost, the proper proportions for building, proper heating, ventilating, fixtures, etc., have been worked out, the idea being to obtain a type of building specially adapted to their purpose, with the greatest economy consistent with the highest efficiency.

Architects draw plans in accordance with these bases provided by the Commission, and the results are well balanced buildings, in which no sanitary feature is sacrificed to showy ornamentation or extravagance incurred by erecting buildings not well proportioned in any of their arrangements to care for the number of pupils they are designed to accomodate.

When school boards in general adopt as scientific a way of building school houses, there will be small need for physicians or any one else to concern themselves about their sanitary features.

THE TREATMENT OF CANCER*

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After many years of discussion concerning the nature of cancerous disease, particularly as to whether it is primarily a local manifestation of a constitutional affection or a local tissue change which in time invades the whole organism, the latter proposition has come to be generally accepted by the profession. It then follows that if all cancer cells are removed from the body, a cure of the affection will be made. Whether or not this can be done in a given case depends upon how early the attempt is made and upon the location of the new growth. In women malignant growths are most frequently located in the mammary gland and cervix uteri. Extension of the disease occurs through the lymphatics and on account of the intimate relation of the lymphatic vessels and glands and their abundant supply to the uterine cervix, extension of malignant disease from that organ takes place very rapidly, and very rarely can all the disease be removed without endangering the ureters. One of the most distinguished surgeons of the country recently informed me in private conversation that he did not have a single case of cervical cancer alive after two years following hysterectomy. He added that he had several cases alive for longer periods than that when he had treated the cases with chloride of zinc and that he no longer recommended hysterectomy in these cases. Whether surgeons generally will agree with this proposition or not I do not know, but certain it is that no safe operation has yet been devised that gives a reasonable prospect of removing all the disease from this region. Not so when the uterine fundus is the primary seat of the lesion. Practically no lymphatic vessels lead from the fundus and an early hysterectomy may reasonably be expected to afford a cure.

Cancer of the breast has for many years been a reproach to the profession. Following the ordinary operation of removal of the gland alone, a return of the disease may confidently be expected to take place in a few months and ten years ago surgeons had little more faith in effecting a permanent cure than they now have in the case of the cervix. The introduction of the Halsted operation and its modifications has, however, changed all that, and now, if the case is received early enough, and the operation performed is sufficiently radical, a large percentage of permanent cures can be effected.

Leading from the breast are several chains of lymphatic vessels. One chain leads to the skin covering the organ and so all of the skin over the gland must be included in the removal. Other lymphatics lead to the sheaths of the pectoralis major and minor muscles and so the original radical operation involves complete removal of these muscles.

Murphy has pointed out that as the lymphatics are situated only in the sheaths of the muscles it is sufficient to divide the muscles, remove the sheaths and after cleaning the axilla, unite the muscles by suture so as to cover the axillary vessels and thus better preserve the functions of the arm. In any event,

*Read before the Lapeer County Medical Society.

the axillary fat should be entirely removed and with it all the axillary lymphatics. If the operation is done thoroughly by one who has had experience and training in the operative procedure, and if the disease is of recent date, the prospect of removing all the cancer cells is excellent.

In recent years the Finsen light, the X-ray and radium have been much vaunted as cures for cancer. At first, we had reason to hope that a great boon had been given to cancerous suffering humanity and that the surgeon's knife in this disease would no longer be required. In this we have been disappointed. The light treatment has little effect upon the primary cancerous nodule in most cases and when it lessens its size, as it sometimes does, the increased liberation of poisonous products and their elimination through the kidneys, irritating these organs, is most injurious to the system. In a few cases the light treatment has no effect at all and even sometimes increases the rapidity of growth. So no rule can be laid down that will generally apply; each case must be treated by itself and effects carefully noted. In most cases after removal of primary focus of disease the X-ray has a positive effect in removing any cancer cells remaining and thus assisting materially in effecting a cure. If the disease is located upon the surface of the body as in the mammary gland, this favorable action may be more confidently looked for than if it is situated in the interior of the body. I have so far seen no favorable action in cases of uterine cancer. Cancer of the stomach is particularly favorable for operative interference if the case is undertaken early. Cuneo has worked out the arrangement of the lymphatic absorbents of the stomach and shown that normally no lymph glands exist to the left of the middle of the greater curvature and that the lymphatic circulation of this area is from left to right. He also showed that the lymphatics of the lesser curvature are in the wall of the stomach itself. Consequently, as Mikulicz has pointed out, all the lesser curvature should be removed to the gastric artery.

W. J. Mayo, in the *Journal of the American Medical Association* for April 7, 1906, describes and beautifully illustrates an operation that conforms to the requirements of Cuneo's lymphatic discoveries. By ligating the left gastro-epiploica, gastric, superior pyloric and gastro-duodenalis arteries, the operation is rendered bloodless.

Appropriate clamps are applied to the stomach after the omental attachments are tied off and the stomach divided. The cut surface of the stomach is sewed up with double rows of continuous suture and after removing the mass, if the duodenum can be easily approximated to the under surface of the stomach, an anastomosis is there made after the manner of Kocher. If the ends cannot be approximated without undue tension, the duodenum is closed by a purse-string suture and an anastomosis is made between the jejunum and posterior wall of stomach about three inches from the divided duodenum. This last method is known as Billroth No. 2.

Of 313 cancers of the stomach operated on by the Mayos up to February 1, 1906, only 26 per cent were early enough to permit of radical extirpation. Of these they have only twenty-two who were operated three years ago, of whom four did not survive the operation and five are living three years, or 22.7 per cent and 18.1 per cent alive and well over three years, a showing which compares well with the operative results for cancer in other parts of the body.

These statistics emphasize the necessity for early diagnosis in cancer of the stomach if cure is to be hoped for. Precancerous symptoms and especially ulceration is generally present, and more

exact methods of diagnosis in use among general practitioners will send an increasing number of favorable cancer cases to the surgeons.

A great many exploratory operations must be made in both cancer of the stomach and breast, if all cases are recognized sufficiently early; and when cancer is recognized the successful operator, the one securing best statistics, will be the one who knows the location of the neighboring lymphatic circulation and who boldly removes all the lymphatic vessels that can possibly carry infection from the seat of disease.

Last month a case was referred to me by my colleague, Dr. Spoor, the history of which he has kindly written for me to incorporate in this paper. I also show you the specimen removed:

"On the 6th of June, 1906, Mr. M., age 55, came to my office complaining of stomach trouble and gave the following history:—Had been a strong, healthy man until he had an attack of the 'grippe' last March and was treated by a local physician for almost six weeks, when his cough and other symptoms subsided and his stomach commenced to bother him. His local physician then gave him some medicine for his stomach. This was about the middle of April. After taking the stomach medicine he could notice no improvement so went to taking patent medicine until he called on me the 6th of June. At this time he complained of a burning sensation in the pit of the stomach which was exaggerated an hour or two after taking food. The pain had never been excruciating. On two previous occasions some watery stuff had come up, but he had never vomited, but had felt nauseated. He said he had been working some, but felt weak and his food did not seem to do him any good. Since March he lost considerable weight, but this he believed was due to his six weeks' illness from the 'grippe.' I gave him some Papain and Sodii Bicarbonate, and also some Tincture Nux Vomica, Fluid Extract of Ergot and Compound Tincture of Gentian to increase motor power of the stomach and requested him to have a stomach analysis made if he felt no improvement. The next day he sent for me and said he could not take the medicine as it caused him so much pain and vomiting. I gave directions for a test breakfast to be given the next morning, when I pumped out the stomach contents and found dried beef he had eaten the day before together with all the test breakfast. On physical examination I also felt a movable tumor that followed the movements of the diaphragm. Stomach analysis showed complete absence of free hydrochloric acid, large quantities of lactic acid, Oppler-Boas bacilli, epithelial cells and some pus. I at once made a diagnosis of cancer of the stomach and advised an immediate operation.

Patient was operated on by Dr. Dodge who removed a growth that completely encircled the pyloric end of the stomach and extended along the greater curvature 5 inches, and along the lesser curvature 3 inches. There was also a cauliflower mass on the inside of the stomach just above the pyloric ring, about the size of a large plum which acted like a valve and caused the obstruction. A considerable portion of the stomach was removed which measured 8 inches along the greater curvature and 5 inches along the lesser curvature, on account of the extensive growth. A microscopical examination of the growth shows it to be a carcinoma with a great deal of round cell infiltration and evidences of degeneration."

In this case, I was able to do the Kocher operation. Urinary examination previous to the operation on several occasions showed normal urine. Nevertheless, acute parenchymatous nephritis followed the operation. He had no stomach symptoms, did not vomit, had no abdominal distention nor pain, but developed high temperature at once and urine showed casts and albumen in abundance. I gave him large quantities of normal saline solution under the skin and per rectum and on the second and third days gave considerable fluid by the stomach which was retained. Seventy-two hours following the operation he died of uremic poisoning. We did not get an opportunity to hold an autopsy.

I append the report of a few cases that illustrate the results from radical operations assisted by subsequent X-ray exposures.

Cast 1. Mrs. M., Remus, Mich., admitted to Mercy Hospital Sept. 5, 1901, bringing with her a letter to me from one of the leading surgeons of Michigan advising the removal of a bunch in her breast which he believed to be non-malignant. I had previously advised a radical operation in this case, feeling certain that the tumor was malignant, but upon the return of the patient with this eminent authority against radicalism, I consented to an exploratory incision. I found the growth to present all the characteristics of cancer and so removed the gland, the husband who was present declining to consent to removal of the muscles and lymphatics. The specimen was sent to Dr. A. S. Warthin at Ann Arbor, who reported that it was a carcinoma in a secreting mammary gland. The following spring the patient returned to me with recurrence in three places in the skin. She was also pregnant, and instead of submitting to another operation as I advised, went to a cancer quack in Fort Wayne. Subsequently, after she had suffered much from the pain of caustic paste application, I had an opportunity to point out the inevitable result if she persisted in such treatment. Her husband then consulted eminent surgeons in Grand Rapids, Ann Arbor and Saginaw and obtaining in each place confirmation of my opinion, sent her back to the hospital, and on March 1, 1902, I removed the recurrent masses which were then suppurating from the action of the caustic, together with the pectoral muscles and the lymphatics of the chest and axilla. So much skin was removed that a large area had to be covered with skin grafts. An abortion occurred within a few hours after the operation and before the wound was healed, small hard nodules appeared in the skin near axillary border. X-ray exposures were at once commenced and repeated daily for several months. No burns were produced and after a few exposures the nodules disappeared. Patient was discharged June 7, but returned every month for nearly a year to receive X-ray treatment. She is at present in perfect health, more than four years following the last operation and five years since the first appearance of the cancer.

Case 2. W. P., Fremont, Mich., admitted June 19, 1902, with cancer of the penis. The neighboring glands were enlarged and I regarded the case as too far advanced for successful removal. X-ray treatments were given daily and the large ulcerating cancerous mass melted away like snow under the rays of the sun. In fact, the whole organ melted away, but the ulcerated surface showed no indication of healing and much suffering was produced by the suppurating glands and burrowing of pus into the scrotum. In August, 1902, I removed the whole mass, including the enlarged glands, scrotum, testicles, and remains of penis, picking up the urethra and attaching it to the skin margin. On account of the extensive suppuration in the inguinal region, it was not possible to remove all of the glands, and I had little hope that the operation would arrest the spread of the disease. The X-ray exposures were continued until October, when the patient appeared to be perfectly well and was discharged.

At the present time, four years after he came under treatment, he is in good health with no sign of recurrence. The beneficial effects of the X-ray in this case cannot be doubted.

Case 3. Mrs. F., Marlette, Michigan, admitted to Mercy Hospital, Aug. 4, 1902, with cancerous growth in right breast and evidence of enlarged axillary glands. Radical operation was done at once and patient discharged on Aug. 27. She took elsewhere a long course of X-ray treatment, and informs me that there has never been any sign of recurrence and that she is now in excellent health.

Case 4. Mrs. D., Cheboygan, Michigan, admitted to hospital Dec. 6, 1904, with cancerous nodule in right breast. This nodule had been present three years and the lady had been almost constantly treated with the X-rays by Dr. Marks of Cheboygan. The exposures had resulted in reducing the size of the tumor, but had not succeeded in removing it. I performed the radical operation, removing the overlying skin freely, so as to require considerable grafting, and the patient so far is in good health with no sign of recurrence. The X-ray exposures undoubtedly had a restraining effect upon the disease in this case. In all these cases the diagnosis was confirmed by the microscope.

I have selected these cases for report because four years or more have elapsed in each case since the appearance of the disease and institution of treatment and the results have not heretofore been equaled in my experience. I have had other cases that as yet show no signs of recurrence, but the time is too short to make that fact of value. In the practice of other surgeons, I have seen sev-

eral cases of cancer of the breast during this time. When something less than total extirpation was done, and in every case that I can now recollect, death has occurred from general cancer within a few years, notwithstanding that X-ray treatment followed the operative work. So, I believe that incomplete operations in cases of cancer are not justifiable and that we are not justified by anything the X-ray has yet done in making use of it as an excuse for not doing proper surgical work. I have had cases of internal cancer and cases of epithelioma of the face and lip that proceeded rapidly to a fatal issue in spite of operation and prolonged X-ray exposures, but such experience is not rare in the history of this disease; while reports of failures are oftentimes more instructive than successes, I do not think that applies to the subject of the treatment of cancer. Literature is full of failures to cure cancer and the profession needs to be encouraged by receiving reports of such cures as may be effected.

ENDOTHELIOMA OF THE BREAST WITH REPORT OF CASE*

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A brief consideration of endotheliomata from the point of view of the pathologist will be of value in enabling us to understand their relation to other tumors and the difficulties encountered in making a diagnosis. The classification of tumors according to their histogenesis is undoubtedly the only scientific one. Following this a tumor having its origin in endothelial cells would be called an endothelioma. Endothelium being of mesoblastic origin and a form of connective tissue, we can immediately classify endotheliomata as connective tissue tumors and hence distinct from carcinomata. Morphologically, they frequently closely resemble the atypical epithelial tumors and hence are often mistaken for carcinoma. In fact, neglecting the mesoblastic origin of endothelium and considering its cells morphologically only, many pathologists have classed endothelial tumors with epithelial tumors. Even yet the distinction is not always clearly made.

Coplin classes endothelioma as a variety of sarcoma, remarking that the picture often so closely resembles carcinoma that accurate differentiation is almost impossible. McFarland, Delafield and Prudden and Ziegler also include endothelioma under sarcomata. Prof. Zeit, in an article on endothelial tumors which appeared in the *Journal of the American Medical Association* for February 24, 1906, points out many ways in which endotheliomata differ from both the carcinomata and the sarcomata and suggests a separate classification, dividing neoplasms into four classes,—epithelial tumors, endothelial, connective tissue, and teratoid.

The actual identification of a given tumor as an endothelioma is a matter attended with some difficulty on account of the frequency with which endotheliomata simulate the structure of a carcinoma, an adenoma, or various types

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of sarcomata. Gaylord and Aschoff maintain that the diagnosis rests on the observation of the transformation of the normally situated cells into those of the tumor. Nicholls in his chapter on tumors in the American Practice of Surgery, Vol. 1, says that a careful search will often show at some point the direct continuity of the tumor cells with those of some lining membrane. Zeit gives several distinguishing characteristics of endotheliomata by which they may be identified microscopically.

But other features are of more interest to the surgeon. Endotheliomata are usually considered as being of a low grade of malignancy, although some of the softer forms are often highly malignant. According to Bland-Sutton, who writes the chapter on tumors in Keen's newly published Surgery, malignancy is more especially shown in the form of local recurrence. And this propensity is indeed very frequently met. Metastases in other organs may form, though not with so great frequency as in the case of carcinomata. Glandular involvement is also encountered, but also less frequently than with carcinomata. Endotheliomata very frequently undergo degeneration with the formation of a colloid material.

As might be supposed from their origin we may find endothelial tumors wherever endothelium is found. Thus the free surface of serous and synovial membranes and those of the brain and spinal cord, the surfaces of tendon and tendon sheaths, the cavity of blood vessels and lymphatic vessels are lined with endothelial cells and hence afford the possibility for the occurrence of endothelioma. Clinically these tumors are of infrequent occurrence, and when found are more often within the thorax or skull.

Endothelioma of the breast is a rare condition. It usually occurs early in life and presents itself as a smooth (occasionally nodulated), movable, rapidly growing tumor, usually painless and frequently tending to break down. Retraction of the skin is not seen, and glandular involvement is seldom felt. Its diagnosis can not be made with certainty without a microscopical examination. If removed there is a likelihood of its recurrence at the former site, and this recurrence will be noted earlier than in the case of carcinoma, sometimes within a few weeks. A permanent cure is much more common after an operation for endothelioma than for carcinoma.

Because of the rarity of the condition and the typical manifestations of the case, I present the following report of a case of endothelioma of the breast, recently occurring in my practice:

Mrs. R., age 30, American born of German parentage; the wife of a baker.

Family history. Patient's mother was operated on for a scirrhous carcinoma of the left breast; death occurring at the age of 53 as a result of the carcinoma having invaded the pleural cavity.

Personal history. Patient is the mother of two children, one nine years, the other fourteen months old. When the younger child was a month old patient noticed a small lump in her right breast. This increased slowly in size, was never painful, and the patient continued to nurse her baby. The lump continuing to increase in size, six months after its appearance, in July, 1906, she consulted her physician, Dr. E. S. Sherrill, who diagnosed a mammary cyst.

This diagnosis seemed to be sustained by the fact that on puncturing the tumor bloody serum gushed out, when no mass could be felt. The "cyst" promptly filled again and an operation was advised.

First operation Aug. 30, 1906. On cutting down, no cyst wall was found, but the cavity was separated from normal glandular tissue by a wall of apparently necrosed and broken down glandular tissue. No tumor mass was found. The diseased portion of the mammary gland was removed with a safe margin of healthy tissue. The skin was trimmed and approximated. Drainage tube inserted. For three or four weeks there continued to be some bloody serous discharge.

This diminished and the wound healed. During this time the patient, contrary to definite

instructions, continued to nurse her baby. The engorged condition of the breast incident to lactation doubtless had much to do with the continued serous discharge.

During the succeeding month nothing abnormal was noted. Then beneath the scar of the first operation the patient noticed a swelling. This slowly increased and she consulted her physician during November. The appearance of this second tumor beneath the scar of the former operation, at a place from which all the breast tissue had been removed, showed that we had to deal with a neoplasm and not with a mammary cyst. There soon occurred a breaking down of the tumor and a thin discharge through an opening in the old scar. Operation was urged and refused until after Christmas.

From the last of November until the time of the second operation the tumor increased until it reached the size of a man's fist. Rapid degeneration occurred, shown by a constant and profuse, thin, foul-smelling discharge. The skin was movable over the tumor except at the old scar, no axillary involvement could be detected, and at no time was the mass painful nor tender.

Microscopical diagnosis. Dec. 20, under local anesthesia, a piece of the tumor was removed and sent to the Detroit Clinical Laboratory. The report of the pathologist, Dr. P. M. Hickey, is as follows: "There are proliferating cells resembling endothelial cells, arranged in alveolar form, often vacuolated, but no mitoses are seen. The growth is of a low grade of malignancy. Endothelioma."

Considering the early appearance of this tumor following the first operation, and its behavior since then, it seems probable that the condition was an endothelioma from the first, instead of a cyst as had been believed.

Second operation Dec. 27, 1906, at Harper Hospital. Entire right breast, pectoral fascia, and part of the pectoralis major removed. Axilla cleaned out and one enlarged gland found. Skin margins approximated and axilla drained by stab puncture.

Pathologist's report on gland.

"This specimen shows the same peculiar structure as that from the breast of recent date. There are infiltrating large nucleated cells occupying lymph spaces, with considerable intercellular reticulum. Occasional multinucleated cells are seen. The picture is one of low grade malignancy, probably of endothelial origin."

P. M. HICKEY, Pathologist.

Convalescence was rapid and satisfactory. Primary union of skin margins occurred, save one spot the size of a five-cent piece, which healed by granulation. Patient's general condition improved and she gained in weight. Jan. 26 a nodule, the size of a small marble, was discovered beneath the skin near the scar.

Third operation Jan. 28, 1907. Tumor removed with surrounding skin and muscle. Skin margins could not be completely approximated and the uncovered area has healed by granulation. At the present date, March 18, 1907, no further occurrence has been observed. The patient is in good general condition, has regained her customary weight, and is attending to her household duties as usual.

The presentation of this case will, I trust, serve as an illustration of some of the characteristics of endothelioma previously mentioned, namely the frequency of local recurrence, the fact that glandular involvement does occur, and the tendency to degeneration; all of which argue for early and complete removal.

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THE IMPORTANCE OF COMPLETE EXTIRPATION IN TONSIL OPERATIONS*

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Adrian.

The purpose of this paper is merely one of emphasis, and not an introduction of anything new or original. Most all authorities agree that, in cases of hypertrophied or diseased tonsil, where surgical measures are indicated, all diseased tissue should be removed. Yet there are those who, seemingly, do not appreciate the value and importance of complete extirpation. I do not think that too much can be said, nor that too much can be written on this subject. There is hardly a general practitioner, either of the city or of the village, who does not wield a tonsillotome, and it is to these that we should direct our attention. Not that they should not use the tonsillotome, for many times they can use it to advantage, but that they should not use it indiscriminately. So, as before stated, it is to emphasize the importance of complete extirpation of the tonsil, that this paper is presented.

If, in laparotomy, the appendix, or ovary is hopelessly diseased, the surgeon undertakes those measures that will immediately or subsequently eliminate all morbid tissue. Such is compatible with good surgical principles. The surgeon does not amputate the end of the appendix, close up the abdominal wall, and leave nature to deal with the remaining diseased portion. He removes the whole of the appendix, whether entirely or partially affected. If he is unable to reach an appendix, deeply situated in an abscess cavity, and there is fear of breaking up nature's protective wall, he establishes drainage or adopts such measures as will be most conducive to the complete obliteration of the diseased member. If the appendix is secured, as much of it as possible is removed, and the stump is so manipulated that nature will complete the process of obliteration.

These are only the general principles of surgery locally applied, and they *are* so applied by the surgeon of ordinary skill in these cases. But the tonsillotome and allied contrivances are extensively used by the unskillful as well as the skilled physician. I have seen many cases where the tops of the tonsils, so to speak, have been snipped off and the greater part left intact, to continue in the process of degeneration. Of course, "every little bit helps," but only in a mechanical way. It is true that the bolus of food meets with less opposition in transit, and there is a little less obstruction to respired air currents and sound waves. The stump remaining, however, is more vulnerable to microorganisms that gain access through uncooked foods and respired air, than before it was operated. Instead of the mouths of several ducts opening into the pharynx, there is exposed the larger lumen of lacunae, in greater number, and furnishing a beautifully prepared culture medium for the propagation of bacteria. After these superficial and inadequate operations, the throat is sore for a time and an active inflammatory reaction ensues; but apparent recovery obtains, the fee is collected, and the patient assured that tonsillitis will never more be a cause of suffering. Sometimes

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it is stated to the patient that the tonsils are liable to "grow again." This is a fallacy, pure and simple, for in those cases where they "grow again," you simply have an exacerbation of a dormant disease in the stump of a poorly operated tonsil, or the stump of a tonsil that has been allowed to remain by unskilled hands and that has continued in the process of hypertrophy. If all adenoid tissue is once removed, there will be no "growing again," no exacerbation, no recurring tonsillitis, no fear for future trouble, absolutely.

But enucleation is a difficult and skillful operation, though considered simple by many physicians. I recall a case, a lady 30 years of age, in which greatly enlarged tonsils, of the submerged variety, were apparently entirely removed by a cautery dissection. The tonsillar fossæ appeared smooth, suggesting the external limiting membrane. I was called in, the following autumn, to see this case in which I had promised immunity from future attacks of tonsillitis. I incised three pharyngeal abscesses in a period of as many weeks. There was no doubt but that remaining fragments of tonsil were primarily responsible. This case is cited to demonstrate that other complications than recurring tonsillitis often follow incomplete tonsillotomy. Since the destruction of the remaining fragments, situated immediately posterior to the anterior pillars, and that had formerly escaped detection, no further trouble has arisen.

Only recently, a girl of 16 years was brought to me for treatment for a sore throat. Six years previously I had removed both tonsils with a tonsillotome under general anesthesia. On examination, I found the tonsilar fossa on the left side clean, but on the right side there remained the stump of a tonsil that had eluded the lasso, so to speak The hypertrophy that had indicated operation in the first place, had continued in the stump. There were crypts and protuberances. An area of redness along the margin of the anterior pillar suggested an adherence of tonsil to pillar. The galvano-cautery was used to enucleate the diseased stump, after first dissecting it from the anterior pillar with scissors. The parents in this case had been advised by their family physician that the tonsils were "growing again," but when I explained that at the first operation it was impossible to remove all of the right tonsil on account of its having such a broad base that it could not entirely become engaged in the grasp of the tonsillotome and that it was not a new growth of tonsil, the parents were satisfied.

This case demonstrates that sooner or later disturbances will arise from any fragments of adenoid tissue allowed to remain when tonsillotomy is attempted, and it has demonstrated to me that I cannot be too thorough in my work.

With children under ten or twelve years of age, I have found that it is nearly always impossible to secure submission to tonsillectomy without general anesthesia. This is unfortunate, for a large majority of these cases are found in children under this age. It is unfortunate for the additional reason that the surgeon cannot execute so complete an operation as when the patient, having possession of all faculties, is able to very materially assist him. Under general anesthesia the operation must be done more quickly, as its field involves the respiratory tract, making the administration of the anesthetic difficult and embarrassing respiration during its performance. Alarming conditions are more to be feared from the anesthetic than from hemorrhage, in my experience. The necessity of combining speed with skill in the use of the tonsillitome under general anesthesia, and the difficulty in securing the proper positions and illumination of the field, tend toward making

the operation incomplete, even with the most clever and skilled surgeons. The surgeon can only do as best he can under the given circumstances.

On the other hand in young children, the hypertrophied tonsil is found, as a rule, to be well circumscribed and to project well out into the pharanx, with a more or less constricted base or pedicle. These tonsils are easily grasped with the tonsillotome, and complete excision is possible. The so-called submerged tonsils are more frequent in the older children and adults, and it is this variety of tonsil that causes the most disturbance and dire effects. They are the most difficult of removal and complete extirpation with the tonsillotome is impossible. The submerged tonsil should not be operated by the general practitioner with a tonsillotome on this account. It has a broad base, and the diseased condition is found to have involved the deepest structure of the tonsil, it being completely honeycombed by the ramifications of enlarged and disorganized lacunæ, which are filled with morbid secretions and food debris. This variety more than any other, demands complete extirpation, and is best accomplished by cautery dissection, though good work can be done with Robertson's scissors or any of the modifications, and with the scalpel. The snare has little or no advantage over the guillotine.

The general practitioner will ever do considerable good with the tonsillotome, but he should be urged to select his cases more carefully, to remove all diseased tonsillar tissue possible, to give a guarded prognosis where complete extirpation is impossible in the younger subjects necessitating general anesthesia, and to deliver the difficult cases over to more skillful hands, meaning by difficult, those cases where the tonsil cannot be easily engaged within the fenestra of the tonsillotome or guillotine, and removed en-masse.

HISTORY REPEATS.

The celebrated letter of Dr. Rush to a young country doctor reminds us that conditions are not growing any worse, but rather better. It contains also some good advice.

Philadelphia, April 21, 1812.

"Dear Sir:—The facility with which a medical education is acquired in our country has multiplied physicians to such a degree that I do not know of a spot in the United States in which you would fix yourself with more advantage than in the one you now occupy. Competition and slow pay are now the conditions of a medical life everywhere. My advice to you is to remain where you are; you will grow with the growth of the settlement. Purchase upon credit, if possible, a small farm; a little debt will make you industrious and furnish you with an excuse to send in your bills as soon as your patients recover. Employ the leisure which a healthy season will give you in agricultural labors; the more you will obtain in this way the more independent you will be of your patients, and, of course, the more you will be courted by them. Happiness does not consist in wealth. A competence, books, alternate labor and ease, to use the words of the poet Thomson, a good wife, a few friends, vicinity to a church, and conduct regulated by the principles of the Gospel constitute the sum total of all the happiness this world is capable of giving, and these may all be possessed and enjoyed in your present situation.

"From, dear Doctor,

"Yours truly and affectionately,

"BENJ. RUSH.

"To Dr. Petriken."

SUMMER DIARRHEA*

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Manistique.

It is not my purpose to present anything new regarding the etiology, pathology, or treatment of summer diarrhea, a disease to which hundreds of children succumb during the summer months in our cities. But it is my purpose to very briefly state and emphasize some of the various duties of the medical attendant who is called to treat one of these little patients suffering with an attack of diarrhea.

Summer diarrhea is an acute, specific, disease, characterized by gastro-intestinal irritation and general sepsis; it is known by many different names—in fact, many of our new authors are known by adding a new name to the long list; among these are epidemic enteritis, zymotic enteritis, ileo-colitis, entero-colitis, gastro-enteritis, muco-enteritis, gastric catarrh, catarrhal enteritis, duodenitis, jejunitis, ileitis, colitis, gastro-intestinal catarrh, and acute gastro-intestinal intoxication. It is really interesting and at the same time ridiculous to read the various causes of death that the secretary of our State Board of Health is sending out every month. Ought we not to have, as a large body of professional men organized under a county, state, and national society, a greater uniformity of terms by which to express the same thing? Of course, when we study carefully the anatomical divisions of the bowel, we no doubt discover localized inflammatory lesions, but in a majority of cases the entire intestinal tract is involved to a greater or lesser extent, consequently the most practical name to apply to this condition is acute catarrhal enteritis or acute gastro-enteric intoxication. As a rule the lesions in the intestinal tract are but slight, at least bearing no relation to the severity of symptoms, which are due principally to the absorption of toxic material, often following very quickly an attack of indigestion.

Among the etiological factors producing this very prevalent and often fatal disease of childhood, first and foremost no doubt is food and feeding. Holt tells us in his late work on infancy and childhood that of 1,943 fatal cases which he has collected, only 3% had the breast exclusively. He further adds that diarrheal diseases in nursing infants are extremely rare, and we have no good reason to dispute such high authority; in fact, our own experience is teaching us the same significant facts, and we as physicians ought to insist just so far as we have any power, that each and every mother, in reasonably good health, shall nurse her own babe. Is it not true that too many practitioners are apt to permit the mother to wean her baby, just in order to be agreeable, and to show superior skill in preparing artificial food as a good substitute for breast milk, and thereby releasing the mother from her maternal duties of the home in order to attend to the demands of society? Of course there are some who can not nurse their babies and others should not. To those we must give timely advice and instructions. Again, a frequent cause of diarrhea is over-feeding and too frequent feeding. Artificially fed babies are nearly always over-fed. The common practice of feeding a baby whenever

*Read before the Upper Peninsula Medical Society, Escanaba.

it cries, or allowing it to have the nursing bottle most of the time, should be under no circumstances allowed. Artificial feeding would not cause so many fatalities in infancy if there were not so much ignorance and carelessness exhibited by the laity. It is surprising how quickly diarrhea develops in a perfectly healthy baby by giving impure milk, and especially when given too frequently; comparatively speaking, there is no better medium in all the food preparations for the development of bacteria than cow's milk.

Age is another predisposing cause; writers nearly all agree that the greatest fatalities of summer diarrhea in children are between the ages of six and eighteen months; four-fifths of all diarrhea in children in our cities occurs under two years of age.

Heat was formerly considered a direct cause in producing so much intestinal trouble among the children, but late investigators tell us that heat is only an indirect cause, producing constitutional depression, excessive perspiration, and great thirst, which is usually satisfied by giving too much milk or other liquid food, nearly always resulting in an attack of indigestion, which, if allowed to continue, will produce serious consequences. There is no doubt, however, that a large majority of the serious cases have an infectious origin. Cow's milk, as it comes to the average consumer, is simply saturated with bacteria; especially is this true in hot weather, and nearly all text-books mention July as the month during which the greatest number of fatalities occur. This does not seem to be true in Northern Michigan, at least not in the writer's experience. Here it is most prevalent during the latter part of August and September.

While it is true that a baby often develops a violent form of enteritis while it is cutting teeth, this does not prove that dentition is a causative factor, except so far only as it interferes with the general health of the child. Among some of the other causes that might be named are surroundings, such as filth and a general unsanitary condition of the house and clothing, swallowing of foreign bodies, and eating of indigestible substances which soon undergo a process of decomposition, producing toxic symptoms of a serious type.

As a rule it is not difficult to make a correct diagnosis. Some cases have a gradual onset, baby is simply a little out of sorts, is peevish and restless, a little looseness of bowels, no gastric disturbances and no temperature, in fact the mother usually ascribes it to teething, but in a day or two the child begins to have severe digestive disturbances, is more or less purged, stools are very offensive, green in color, at times blood streaks may be seen, temperature at this time about 101 to 102, tongue slightly coated. There is thirst and very rapid pulse. If this condition is not remedied at once the child passes from bad to worse, presenting a picture of general systemic infection. Others do not have this gradual onset, but are stricken down suddenly, often with convulsions, others soon pass into a condition of profound toxemia. Sometimes a perfectly healthy baby is suddenly seized with profuse vomiting and purging, eyes are sunken, hands and feet are cold, very rapid pulse, temperature 104 to 106. While a diagnosis is usually easy, the medical attendant must not lose sight of intussusception, appendicitis, etc., which are usually ushered in with vomiting and a few evacuations of bowels, due to an effort of nature to empty bowel below obstruction.

The prognosis of course largely depends on conditions. If seen early and properly treated the majority of cases get well, but unfortunately this is not always the case. If the physician is not called until general infection has taken

place or some serious lesion of bowel is present, a guarded prognosis should be given, especially if baby is under six months of age, artificially fed, no suitable nurse at hand and the surroundings unhygienic.

There would not be so many death certificates needed for enteritis, colitis and all the other synonomous names included, if we physicians would use a little more common sense and a little less medicine. For convenience I will mention three classifications of treatment,—prophylactic, dietetic, and medicinal. Here is where the old saying, that "an ounce of prevention is worth a pound of cure," is very applicable. The majority of severe and even fatal cases are very mild in the beginning, simply a little gastric disturbance—which by the way is a danger signal usually not heeded by the mother and sometimes not even by the physician. At this early stage, the withholding of all food for twenty-four hours with one or two drachms of castor oil would cut short and prevent serious consequences. If in a crowded city, baby should be sent to a park. Pure air and plenty of it would be a greater factor in reducing mortality rate in summer diarrhea of infants in our crowded cities than any other one remedy that could be named, excepting absolute cleanliness of all the surroundings, including napkins, clothing and nursing bottles. It is not sufficient simply to wash napkins, they must be boiled. Mother should always disinfect her hands after handling napkins. There is good reason to believe that some degree of contagion is present in some cases. Another prophylactic measure is regularity in feeding, quality and quantity of food, modification of cow's milk if cow's milk is used, and to be absolutely sure that it is pure, either by strict sanitary measures regarding receptables and transportation, or by sterilization. Impure milk and too much of it is perhaps the greatest causative factor.

Our State Board of Health is lavishly distributing leaflets among the laity on the cause and prevention of all contagious diseases, which is very good so far as it goes, but I believe a general crusade of education should be inaugurated by the medical profession, petitioning the State Board for additional leaflets to be sent to all the mothers of Michigan, containing full instructions on infant feeding, and emphasizing in italics the danger if instructions are not followed. It is surprising to see the amount of ignorance and carelessness shown in almost any community along this line.

One of the most important duties of the physician is to carefully supervise the dietetic treatment. He must be master of the situation, always courteous, but positive in all his remarks. His duty is to see that all food is withheld for at least twelve to twenty-four hours, since at this stage digestion is practically arrested and food in any form would only do harm, especially in bottle-fed babies. Pure water may be given freely, as it satisfies thirst and supplies liquid for the wasted tissues. After all food has been withheld for twenty-four hours, barley and albumen water should be given cautiously, and stimulants when required, but only in small quantities, well diluted. If the baby is nursing the breast may be given gradually after the stated interval. Napkins should be examined carefully, and as soon as any symptom of indigestion is manifested, another interval of rest must be taken. The same rules must be followed with bottle-fed babies, only more care is needed and greater difficulties are encountered in the preparation of food. Often the skill and ingenuity of the physician is taxed to the utmost in this direction. As a rule, pure cow's milk, modified to suit the individual case, is the best for babies that must be artifi-

cially fed. As to formulæ, experience teaches us that no two babies thrive well on the same formula, consequently I will refer you to any of our standard text books, or perhaps better still to your own individual experience. The same precaution needed in infants must be observed in older children; if we must err, let us do so by giving too little food instead of too much.

In a few cases milk in all forms and modifications must be excluded for a time; in such cases, meat-juice and other animal broths carefully prepared without any fat, and perfectly predigested, must be tried, alternated with barley and rice water; some babies do well on the artificially prepared foods on the market.

In medicinal treatment much is yet desired, for we have no specifics. The various serums on the market are as a rule disappointing, due no doubt to the fact that in the majority of severe cases there is a mixed infection. Intestinal antiseptics are likewise disappointing, at least to a great extent. The medicinal agents used by the average physician today in the various forms of diarrhea are almost legion, while all of these, either singly or combined, may have some virtue. There are but four in my experience that are really indicated in the majority of cases.

Let me read them in order of importance: calomel, castor oil, opium and bismuth. The first indication for medicinal treatment in an acute attack of diarrhea in an infant is to aid nature in her efforts to clear the alimentary canal, and this should be done quickly and thoroughly. Calomel is the best drug to use, and it should be given in one-quarter grain doses, hourly, until six or eight doses are taken, to an infant under six months of age; for children from eight to eighteen months one-half grain should be given until four or five doses are taken. Calomel is the best drug in the early stage, because it is easily administered, is a local sedative to stomach, a good antiseptic, is well borne by children, and always accomplishes the desired effects. It is best given with a little bicarbonate of soda and saccharin, well rubbed together. It is good practice to follow calomel with castor oil, in one to two drachm doses, about six hours after the last calomel powder.

I would also recommend in these cases at the first visit to irrigate the colon; I always carry a soft rubber catheter in my satchel, which, after being sterilized, is attached to a fountain syringe. For infants under six months, one pint of saline solution may be used; of course care must be taken in this little operation; usually the catheter is easily inserted if well lubricated, but should it coil upon itself, withdraw partly and try again; this process is to be repeated twice a day for a few days; in older children one quart may be used. These colonic irrigations are productive of much good if properly given, as they facilitate the expulsion of great quantities of irritating material, and reduce temperature. After the entire alimentary tract has been thoroughly emptied, bismuth is indicated and should be given in large doses, ten to fifteen grains to a baby one year old. I prefer the subnitrate, which usually agrees the best; it may be given every three hours until the desired effects have been accomplished. It is generally customary to combine opium in some form in case there is pain and watery stools, but as the years go by, experience teaches us to be extremely careful in giving opium to infants and small children by mouth. Opium is indicated in many cases to establish rest and to lessen intestinal peristalsis, two very important things to accomplish. I have to a great extent abandoned the routine method of prescribing it every two, three or four hours, by mouth, but instead give it hypodermically; in this way it does not interfere so much with

digestion, and requires but very little to accomplish the purpose. To an infant under six months, the initial dose should not exceed 1/120 grain, one year of age 1/80 grain.; always use a combination of morphine and atropine, this dose may be repeated once or twice during the day, gradually increased if necessary.

Of course, extra precaution is necessary as to aseptic measures. I have never had any bad results from this method, and most heartily recommend it. At this time the evacuations must be closely watched, for if they lessen in frequency and improve in color, the breast may be given to those who are breast fed, to others some form of modified cow's milk, in neither case oftener than three or four hours. Should any disturbances follow, food must again be withheld for a short time; in some cases all food should be predigested, in others all milk must be omitted, and animal broth substituted for a few days. Stimulants are required in nearly all cases; should temperature be high, nothing is better than warm and tepid baths, if circulation is sluggish, good results will follow a warm mustard bath, these may be given three or four times during twenty-four hours. An ice bag under the head is highly beneficial. In protracted cases of colitis, small doses of calomel combined with bismuth usually gives good results. Many times the practitioner's skill is taxed to the utmost in handling these little patients.

In conclusion, allow me to emphasize the fact that it is impossible to indicate a special mode of treatment suitable in all cases of summer diarrhea, since each case, whether it be mild or severe, acute or chronic, presents certain characteristics and peculiarities, in which remedies must also be varied according to the different stages of the disease, and previous condition of health and constitution.

PHILOSOPHY OF OSLER.

Except it be a lover, no one is more interesting as an object of study than a student.

No human being is constituted to know the truth, the whole truth and nothing but the truth: and even the best of men must be content with fragments. In this unsatisfied quest the attitude of mind, the desire, the thirst, the fervent longing are the be-all and end-all.

The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation.

Men will not take time to get to the heart of the matter. After all, concentration is the price the modern student pays for success. Thoroughness is the most difficult habit to acquire, but it is a pearl of great price, worth all the worry and trouble of the search.

A true student is a citizen of the world, the allegiance of whose soul, at any rate, is too precious to be restricted to a single country.

Lift up one hand to Heaven and thank your stars if they have given you the proper sense to enable you to appreciate the inconceivably droll situations in which we catch our fellow creatures.

Hilarity and good humor, a breezy cheerfulness, a nature sloping toward the southern side, helps enormously both in the study and in the practice of medicine.

Io victis! Let us sometimes sing of the vanquished. Let us sometimes think of those who have fallen in the battle of life, who have driven and failed, who have failed even without the strife.

You can not reach any better position in a community; the family doctor is the man behind the gun who does our effective work.

The successful teacher is no longer on a height pumping knowledge at high pressure into passive receptacles—he is a senior student anxious to help his juniors.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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JUNE

Editorial

Lock-jaw is dreaded by the laity, and, we must admit, with great reason, for our means of cure are only exceptionally successful. The general public has not until recently identified the term "lock-jaw" with the scientific synonym "tetanus," and even now the latter is too little recognized. Physicians still need to translate it, in order that it may become as familiar as "diphtheria," "tuberculosis," and "pneumonia," formerly called in popular speech "putrid sore throat," "consumption," and "lung-fever." The laity associate tetanus with wounds from rusty nails perhaps more than anything else, but in point of fact such etiology operates rarely in comparison with other causes, especially blank cartridges and other materials of the Fourth of July celebration. The cases of tetanus furnished by children during the early July season are in excess of all other cases occurring in the whole year, and the death roll ensuing is like a sacrifice on the altar of Independence—a sacrifice that can hardly be welcome to the shades of the framers of the Declaration.

For four years the *Journal of the American Medical Association* has published a report of tetanus resulting from Fourth of July injuries. In 1903 there were 415 cases with 406 deaths. In 1906 there were 89 cases with 75 deaths. This diminution was largely due to the educational campaign carried on by the profession in a few localities, and to the action of the authorities in several places, restricting the sale and use of certain dangerous implements. Moreover, the widespread dissemination of the knowledge of the seriousness of these wounds and the use of prompt surgical measures and of antitetanic serum, have doubtless prevented many a case of the disease.

A good instance of what can be accomplished is furnished by St. Louis, in a report by Dr. H. J. Scherck, in the *Journal of the American Medical Association,* August 18, 1906. For several years every case of injury from explosives coming to the city dispensaries has had immediate and thorough operative treatment and an injection of serum, and has then been carefully watched until well. The work in this line has been assisted through the cooperation of the press, who gave much space each year, at the right time, to a description of what had been accomplished, and what should be done in case of injury. The benefit derived from this campaign in St. Louis is shown by the figures. In 1903 there were 56 such wounds reported, which had no treatment by the serum, and 16 cases died of tetanus. Since then the serum has been used in every instance and there has not been a death, and last year alone 170 cases were treated. If statistics were collected elsewhere the same result would probably be noted. The writer has seen at times thirty cases of these injuries during June and July, of which, treated in this manner, not one developed tetanus. At the Massachusetts General Hospital, in Boston, Bain took cultures from many such wounds at the time of first treatment. A certain number showed the presence of tetanus bacilli in the tissues and wadding removed, but no case developed tetanus which had early treatment at the hospital.

The annual tetanus epidemic, then, is close at hand, and the medical profession can do much to mitigate its sever-

ity. This may be done in two ways: First, by spreading among the public a proper appreciation of toy pistols and fire-crackers; second, by appealing to the local authorities, with the purpose of prohibiting or restricting the sale of them. If the desired regulation cannot be procured, or, if procured, cannot be enforced, the public should then be taught the danger of all Fourth of July wounds, the necessity of prompt and radical surgery and of serum injection, and the places where such treatment can be secured by the deserving poor. The medical profession in every community ought to interest the local press, and see that articles are written in simple, forceful manner, instructing the public along these lines. The subject of tetanus ought to be presented before a full meeting of every County Society, with complete discussion, and there should be a local depot for the supply of antitetanic serum.

Fourth of July wounds cannot be passed by with mere cleansing and dressing, or with perfunctory exploration; the external wound is often small, and whether small or large, must be laid still wider open. Every patient presenting such a wound should be given a general anesthetic; the injured part is thoroughly scrubbed with soap and water and antiseptics; a tourniquet is used where possible; the wound is enlarged, the ragged edges trimmed, and every bit of lacerated tissue and foreign matter removed; it must be remembered that particles of wadding may lodge at points remote from the wound of entrance, and these may often be traced by a slightly discolored tract which they have made in traversing the tissues; it is probably unwise to use any disinfectant like strong carbolic acid, because it causes a superficial coagulation and shuts in any existing bacteria; it is best to pack the wound wide open with dry sterile gauze, without applying any sutures; if the wound is on an extremity, a splint is applied. At the time of operation a dose of antitetanic serum, ten cc., is given subcutaneously, with aseptic precautions. It can be procured in glass syringes ready to use, like the modern doses of antidiphtheritic serum. The after-treatment consists of daily dressings and observation of temperature. A slight rise of temperature is often noted the day following the serum injection, as well as an occasional urticarial eruption.

If the foregoing procedure were made a routine in every case of wound from blank cartridges, gunshot, fire-crackers, toy pistols, and fire-works, the occurrence of tetanus would be rare. If halfway measures are adopted and tetanus results, one must feel a heavy burden of responsibility, for the disease can be easily prevented, but when once established, is seldom cured.

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A medical building and reference library are the crying needs of the profession of Detroit.

The Wayne County Society has met for the past year in the Supervisors' Room in the County Building, and it has been so unsatisfactory that the average attendance has fallen below that of previous years. The acoustics of the hall are bad, making both speaking and listening difficult. Many have expressed themselves as unwilling to enter into the discussions on this account; certainly the discussions have not been so spirited as in former years. A change is needed and needed badly. If a hall cannot be elsewhere obtained, one of the rooms used by the Justice's Court might be obtained. The meetings there would be less formal and better fellowship would prevail. But the ideal solution of the difficulty would be the procurement of a building which would be the permanent home of the society. That

this could be accomplished at once, or within a year, is believed by but few; that a start should be made, and made at once, is believed by the majority.

Elsewhere in this issue will be found an account of a recent meeting of the society at which the initial steps were taken toward securing such a building, or at least, toward beginning a fund with which such a home may later be built. A committee was authorized, which will study the matter and devise ways and means. It would seem to us that a wise solution would be the purchase of a house and lot somewhere in the belt upon which business has not yet encroached, and which is, at the same time, too near the business section to be very desirable for residences. Such a property could be purchased for ten or twelve thousand dollars. Unless all signs fail, the present is the time for making such a purchase. The major portion of the amount could be obtained at once, and a mortgage assumed for the remainder. The rise in value of a property of this kind would easily take care of the investment.

The building thus acquired could be remodeled at a comparatively small cost, the lower rooms being thrown together for an audience hall, and the upper used for library purposes. In the early days of their development, the medical libraries of Boston, New York and Cleveland occupied such houses. The splendid Medical and Chirurgical Faculty Library in Baltimore is still located in an old building, although, even with additions, the facilities are inadequate at the present time.

What was done in Boston, New York, Cleveland, Baltimore, and other cities, can be done in Detroit. It needs but the enthusiastic work of a few wholesouled men.

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How could a library be gathered? This question has been asked, during the recent agitation on the subject. Once a proper place is obtained and once it is demonstrated that the books will be cared for, donations of journals and volumes would come in from many sources. Many publishers send their new books to such libraries; many authors do likewise; libraries are on the free list of almost all medical journals (the JOURNAL goes free each month to not less than fifteen); valuable private libraries would be bequeathed; a book fund would undoubtedly later be established, reprints and monographs would accumulate rapidly and when properly catalogued would make a most valuable asset; separate sections on the specialties would be donated by men interested in those subjects; moreover, the Association of Medical Librarians furnishes lists of duplicates, and makes exchanges, often at no greater expense than the freight bills.

Thus it is that once begun a library would undoubtedly grow with astonishing rapidity. The nucleus, already in the Detroit Public Library, which could without doubt be obtained, is more valuable than is generally supposed.

The gathering, arrangement and care of such a library would mean much work and would require much energy, but to men of certain tastes, and there are such in Detroit, it would be a pleasure. The only requisites are the building, even though it be humble, and some feasible scheme of maintenance.

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The cost of maintenance would not be excessive. The amount for repairs, insurance, and interest would depend, of course, upon the character, cost, etc., of the property acquired. The "running expenses" would be made up, for the most part, of five items, i. e., heat, light, attendants, binding, book and journal purchases. The heating and lighting might be estimated at $200 and $75, respectively. The oversight of the library, cataloguing, etc., would be done

by some member, without salary, with the aid of a stenographer who would keep the library open from nine a. m. to five p. m. The services of such a stenographer can be readily obtained for $350 per year. Many a medical student would be glad to look after the heating and keep the library open evenings for his room rent and perhaps $200 a year. (It might be closed evenings during the summer months.) Cleaning might cost another hundred dollars.

Two hundred dollars a year will pay for and bind twenty-five of the best journals, which in addition to the gifts, would make a very attractive journal room. Add to these amounts, one hundred dollars for incidentals, and the total is less than fourteen hundred dollars.

The Society formerly paid $30 per month for eight months—and at one time more—for its meeting hall. We see no reason why this amount should not be appropriated toward the "running expenses." One hundred and twenty library members, paying $10 a year, or better, 160 paying $7.50 a year, would cover the expense of a plan which seems to us feasible, and not so ambitious as to court disaster.

A properly equipped library would do more to stimulate medical work and medical thought in Detroit than any other conceivable factor. It is true that a majority of references—of the ordinary kind—can be found in the city, if one knows where to go for them, but the looking up of a series of references is such a task and requires such an expenditure of energy, that one hesitates to begin and tires before his task is completed. This may account for the paucity of thorough papers which have been turned out by the Detroit profession.

But it is not for the man engaged in research, or the man with literary ambitions for whom a library is most needed, although such appears to be the popular opinion. In discussing the matter one hears too often the sentiment expressed that a library is a good thing for a few, but not necessary for the busy practitioner, as he already has more books than he can read. Such men usually do not read at all and are the ones who profit the most by having a pleasant place where an hour or two may be spent, a few times a week, in looking over the current journals and the newer books. It is wonderful how such a habit grows upon one, if the facilities are such that it is pleasure and not work. It is in this stimulation of the reading habit in those who read but little, that a medical library serves its greatest purpose.

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The spread of medical knowledge is dependent, in a great measure, upon the medical press. It is largely influenced by current medical literature, but not a little also by the text books, systems and encyclopedias which from time to time appear. Medical science is now so far reaching, its ramifications are so many, and its current literature so diffuse, that no one man can keep abreast of the times, without constantly reading summaries of present knowledge. A good text book is one which contains such summaries, but the man who reads often feels the need of something more extensive than the ordinary text-book chapter, and he turns to the monographs of noted authorities. Fortunate is he who has access to a library in which these monographs may be found. Not every man is thus favored. It is, therefore, a matter of congratulation that Osler has undertaken the publication of a series of monographs so systematically arranged that the whole field of internal medicine will be covered.

In the introduction to this new system, Osler shows how profoundly the publication of such works has influenced medicine. In America we have had Pepper's *System of Medicine,* issued

nearly twenty years ago; Loomis and Thompson's *System,* issued in 1897; the *Twentieth Century Practice of Medicine,* which appeared from 1895 to 1900, Buck's *Reference Handbook,* a second edition of which came out between 1900 and 1904, and selected volumes from Nothnagel's *System.*

In England, Reynold's *System of Medicine* and Allbutt's *System* have done much to mould medical thought. In France, Charcot's *Traité* has gone through two editions, and in Germany, Virchow's *Handbuch,* von Ziemssen's *Encyclopedia,* and the great *Handbuch* of Nothnagel have made a great impress, not only upon the medicine of Germany, but also upon the medicine of the world.

In proof of the need of works of this kind, Osler makes a comparison of the first volume of this new work and the first volume of Pepper's *System.* "It seems scarcely credible," he says, "that in so many directions in so short a time the entire outlook on the science of medicine can have been so revolutionized." Three illustrations are given: Our change of view regarding heredity, as modified by the studies of Weismann and others; our knowledge of the chemical processes of the body, more particularly those processes which have to do with metabolism; and the extension of our knowledge regarding the causitive agents in the infectious diseases.

These are but a few of the phases of medical science which twenty years have vastly changed. How, but by reading and attending medical societies, is the practitioner to keep from practicing in accordance with his lectures notes, written perhaps twenty years ago? We know certain men who say that they never buy books, because after a few years' use, they are out of date, but how few apply the same philosophy to their automobiles.

The presentation to Dr. A. P. Biddle of a beautiful silver platter, as a testimonial for his services as secretary-editor, extending over six years, was one of the pleasing features of the Saginaw meeting. The platter is a large one; on the inside is engraved the Biddle crest and on the bottom the following inscription: "The Michigan State Medical Society to Andrew P. Biddle, M. D., in Recognition of his Efficient Services as Secretary, July 1, 1900, to January 1, 1906."

Doctor Burr, chairman of the council, in making the presentation, said:

Mr. President: Mayor Baum in his felicitous welcoming address described to the Society the Saginaw of fifty years ago and dwelt upon the difficulties experienced in the early days in making habitable the spot on which has been built this beautiful and interesting city; and Dr. Connor in his remarks last evening carried us one hundred and fifty years further back (laughter), tracing minutely the progress of civilization and the instrumentality of physicians in its development. We were told of the hardships of the pioneers and their magnificent efforts through which the present day prosperity has been established. Everything is owing to these hardy men who blazed the trail, hewed out paths through trackless forests and established in the then wilderness, first the camp, then the cabin, then the settlement from which have grown the charming villages and busy cities of the present day. They caused this forbidding territory to blossom as the rose and to yield its best. All honor to the pioneer!

A few years ago the medical profession was lost in the wilderness. It was without cohesion or organization; indeed, torn apart by factions and uninfluential as a body because of the impossibility of an effective line-up. Some master minds conceived and presented a plan of organization, which was more or less promptly adopted in the various states of the Union. Michigan was one of the first to fall into line. Among the names in the early efforts in this direction which stand out prominently are those of Leartus Connor and Andrew P. Biddle. Like the pioneers of old, these latter day pioneers builded well. From a feeble and frail organization (that of the earlier

state society, comprising about six hundred physicians), the membership of this body has grown in the period of six years since re-organization to over two thousand, and Mr. President, the brilliant addresses, the thoughtful papers and discussions, and the sane and intelligent committees' reports at this meeting indicate indubitably that the profession of Michigan is in the language of the small boy, "going some." Everybody is aware that the laboring oar in an association is managed by the secretary, if he is efficient, and during the critical formative period, the Michigan State Medical Society was admirably officered in this respect as well as others. The then secretary, Dr. Biddle, possessed of infinite tact, rare good judgment, and excellent medical qualifications, was ideal in that position. To him the Society is largely indebted for its relatively smooth career under what might have proven tempestuous conditions and its avoidance of sunken rocks and dangerous shoals. The Society in just recognition of this self-sacrificing and difficult work, appointed at its last meeting a Committee consisting of Drs. C. T. Southworth, Angus McLean and myself to procure a testimonial to be presented to Dr. Biddle at this time. The Committee has performed this pleasant duty and now, Dr. Biddle, the Society presents to you this bit of tableware with the assurance of its profound esteem and respect, and expressing the hope that "all may be fish that comes to your net"—either gold-fish or edible fish.

Dr. Biddle replied in part:

I am indeed happy, Mr. President and members of the Michigan State Medical Society, that I should have been singled out among the many earnest co-workers in the labor which devolved upon us during the exacting period of the reorganization of the State, Councilor District and County Medical Societies upon County representation as the unit, to receive the magnificent physical expression of your approval. But what is far more expressive to me is the fact that you have seen fit to honor me with this showing of your love and esteem during my life time. A thousand times dearer to me is this thought than that after my life has passed away I may be deemed worthy of a place among "Connor's Archives of Michigan's Dead," honorable as such mention is. Feeling as I do, I trust others may be the recipients during their physical life of your love and esteem, that they too may be stimulated by such lofty sentiments to give their best to our work, and that, as we honor ourselves, our profession may be honored among men.

Again, I would express my deepest gratitude for your beautiful gift. Coming as it does from my own beloved profession, year by year it will become dearer as the expression of the place I was fortunate to hold in your esteem.

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The Forty-second Annual Meeting. The annual meeting of the State Society, held at Saginaw, May fifteenth and sixteenth, was one of the most successful held within recent years. All who were present agreed that there was in evidence throughout the sessions, a most noticeable earnestness on the part of those who participated in carrying out the program, and an unusual attentiveness on the part of the listeners. The arrangements, carefully planned by the local committee, were excellent and the entertainment lavish.

The attendance was the largest of any meeting since the one held in Detroit in 1903, the registration indicating that 341 members were present.

The House of Delegates held three sessions, the first, on Tuesday evening, being unusually well attended. The reports of standing and special committees were well prepared and well delivered by the respective chairmen. These reports will appear in full, together with the official proceedings, in the July issue of the JOURNAL.

In the report of the Council, Dr. C. B. Burr paid an eloquent tribute to the memory of Doctor Herdman, formerly Councilor of the First District. The work of Dr. McCormack was reviewed and it was shown that post-graduate courses had been established in six county societies. The paid membership for 1906 was given as 1,873, and the present roll as 2,011. The prompt collection of dues was urged. The financial condition of the society was shown to be excellent, $21.62 having been added

to the treasury during 1906, despite the unusual appropriations of $500 for the San Francisco sufferers and $200 for Dr. McCormack's work. On January first, the sum of $1,227.08 was in the hands of the Treasurer, all obligations having been met.

The Committee on Legislation and Public Policy reported through Dr. J. W. Inches, of St. Clair County. It was shown that the bill amending the Criminal Mal-practice Act, which was prepared pursuant to a resolution offered in the Gynecological Section at the Jackson meeting, had been referred to the House Committee on Judiciary, and that this committee had refused to report it, "on the ground that such an amendment would lessen the probability of a conviction by rendering unavailable, evidence which can now be used. Your committee, after further consideration, is of the opinion that the point raised by the Committee on Judiciary is well taken and nothing further has been done in the matter." The bill prepared by the Committee on the Patent Medicine Evil and presented by the Legislative Committee, was found by the House Committee on Public Health to be entirely too drastic. A substitute bill, conforming more strictly to the provisions of the national law, has therefore been prepared. It was shown by the committee's report that the L'Esperance Bill, the text of which was published in full in our April issue, is not receiving the endorsement it deserves from the members of the State Society.

Resolutions were later unanimously adopted endorsing the L'Esperance Bill and the Secretary ordered to transmit a copy of the resolutions to each member of the Legislature.

Dr. G. A. Hafford, Chairman of the Committee on the Patent Medicine Evil, said, in his report, that the committee had made an effort to call the attention of the lay press to the pernicious effects of much of the advertising carried in the periodicals of the state. A letter had been sent to the Secretary of the Press Association, but it apparently received no attention, as the committee did not receive even the courtesy of a reply. The committee had been able to get resolutions before religious and ministerial conventions on several occasions regarding the advertisements in the religious press. "With the medical press we have as great difficulty as with any other. Not alone the cheaper and irresponsible publications which cater to the uneducated physician and whose main assets are the voluminous advertisements, which fill their cheaply printed pages, but some of the higher grade of medical journals, and even our own organ might, in the opinion of the committee, be open to criticism." The committee's bill relative to pure food and drugs was reported as in the hands of the Attorney General of the State. It was recommended that the members of the society keep copies of the reprinted Collier articles on their office table.

On recommendation of the Council, the House of Delegates defined the position of the STATE JOURNAL, regarding advertisements as follows: "Advertisements of remedies approved by the Council of Pharmacy of the American Medical Association may be admitted. Remedies disapproved by the Council shall be excluded. Remedies advertised to the laity shall be excluded. The JOURNAL does not necessarily approve of the remedies, articles, hospitals, schools, etc., advertised. Reading notices in 'The Advertiser' shall be excluded after existing contracts expire. The JOURNAL invites professional criticism of individual advertisements. The editor is instructed to exclude advertisements of remedies which seem questionable."

Dr. W. R. Parker, Chairman of the Committee to Encourage the Systematic Examination of the Eyes and Ears of

School Children, reported that the State Board of Health and the State Board of Education had adopted resolutions to the effect "that measures be taken by boards of health, boards of education and school authorities, and, where possible, legislation be secured looking to the examination of the eyes and ears of all school children, that disease in its incipiency may be discovered and corrected." The attention which this matter is receiving in other states was reviewed.

A resolution was adopted requesting the Committee on Legislation and Public Policy to ask the Legislature for an appropriation of $500 to be placed at the disposal of this committee.

Dr. Flemming Carrow, Michigan Member of the National Legislative Council, American Medical Association, reported regarding the work accomplished during the year.

One session of the general body was given up to the consideration of the contract practice problem. The Committee on Contract Practice, through Dr. T. S. Langford, of Jackson, gave a detailed report of conditions throughout the State.

The conclusion of the report is as follows: "Your committee would call attention to certain facts brought out by correspondents in their reports. Not all forms of contract practice should be subject to condemnation, as for example, contract practice as carried on for certain mining corporations. In some communities, men of unquestionable moral integrity and high standing in the profession have been and a few seem yet to be engaged in forms of contract practice which seem to the committee objectionable. In most instances local societies are totally unable to control the evil without serious danger of disruption, although a few counties, notably Marquette, Mason and Emmet, have succeeded in holding the practice in check.

The following resolutions were adopted:

WHEREAS, In the State of Michigan there is a large amount of medical and surgical service rendered to individuals in accordance with some form of contract entered into by physicians and certain organizations, and

WHEREAS, This form of practice in a great number of instances works to the serious detriment of the interests of the profession and of the general public, and

WHEREAS, This form of practice is not diminishing, but on the contrary seems to be increasing at a rapid rate; be it

Resolved, That the Michigan State Medical Society heartily commends and supports judicious action of the component County Societies to the end that objectionable practice of this character be abolished or limited as far as possible; and be it further

Resolved, That the Secretary of each County Society be urged to file with the State Secretary as much data as possible regarding the character of such contracts and the name of organizations seeking to make such arrangements with physicians with an approximation of the number of patients affected thereby, and to secure as complete a list as possible of members who agree *not* to do contract practice and that these reports and names be compiled and published in a regular issue of the JOURNAL. Further, be it

Resolved, That the State Secretary send a copy of these resolutions to all employers' liability companies, sick benefit and fraternal organizations doing business in Michigan which solicit physicians to enter into such contracts.

WHEREAS, The average medical student graduates with little other than intuitive knowledge regarding the ethics of his profession, be it

Resolved, That the Council endeavor to establish in each Michigan Medical School a course of instruction upon this vital topic, and that special attention be thereby called to the evils of contract practice and the division of fees, and to the importance of early affiliation with the County and State Society.

Dr. A. P. Biddle was presented with a magnificent silver platter as a token of appreciation for his six years' of arduous labor as secretary-editor. Dr. Burr, chairman of the council, made the pres-

entation speech. (See page 300.)

Resident honorary members were elected as follows: Dr. James Willson, Flint; Dr. Samuel Catlin, Tecumseh; Dr. Mary Towsley, Kalamazoo.

The officers chosen for 1907-1908 were: President, Dr. Herman Ostrander, Kalamazoo; first vice-president, Dr. W. R. Parker, Detroit; second vice-president, Dr. E. E. Curtis, Saginaw; third vice-president, Dr. H. J. Kinne, Frankfort; fourth vice-president, Dr. H. L. Bower, Greenville. Drs. A. E. Bulson, of Jackson, and B. H. McMullen, of Cadillac, were reelected councilors for the second and ninth districts. Dr. A. L. Seeley, of Mayville, was chosen councilor of the eighth district, and Dr. C. J. Ennis, councilor for the twelfth district.

The section officers for the coming year are: Medicine, Dr. D. M. Cowie, Ann Arbor, chairman, and Dr. G. F. Inch, Kalamazoo, secretary. Surgery, Dr. H. B. Garner, Traverse City, chairman, and Dr. J. E. Gleason, Detroit, secretary. Gynecology and Obstetrics, Dr. A. N. Collins, Detroit, chairman, and Dr. C. G. Parnall, Jackson, secretary.

Drs. H. O. Walker, Detroit, and Reuben Peterson, Ann Arbor, were chosen delegates to the American Medical Association for two years, with Drs. D. K. Black, Greenville, and C. H. Johnston, Grand Rapids, as alternates.

Manistee conducted an enthusiastic and successful campaign for the 1908 meeting. The time of the meeting was left to the officers of the society.

The most attractive event of the meeting was the address by Dr. J. B. Herrick, Professor of Medicine in Rush Medical School, on "Methods of Diagnosis." The subject was treated in a broad and philosophic manner and was much appreciated.

Those registered were:

Bay—F. A. Baird, Chas. H. Baker, S. L. Ballard, R. W. Brown, Morton Gallagher, J. W. Hauzhurst, A. W. Herrick, E. A. Hoyt, William Kern, H. B. Landon, John McLurg, H. H. Merriman, D. J. Monroe, G. W. Moore, F. E. Ruggles, C. A. Stewart, D. A. Stone, C. M. Swantek, Mary A. Williams, W. W. Williams.

Benzie—E. J. C. Ellis, H. J. Kinne.

Branch—W. A. Griffith, H. W. Whitmore.

Cass—E. A. Planck.

Calhoun—A. W. Alvord, Edwin M. Chaney, W. S. Godfrey, Geo. C. Hafford, Wilfrid Haughey, W. H. Haughey, A. F. Kingsley, J. L. Ramsdell.

Cheboygan—W. Earle Chapman, C. B. Marks.

Chippewa—R. Bennie, E. H. Webster.

Clinton—J. T. Abbott, E. Schemer, James E. Taylor.

Delta—A. L. Laing, G. W. Moll.

Eaton—A. H. Burleson, W. H. Enders, W. E. Newark, B. D. Niles, A. R. Stealey.

Genesee—W. G. Bird, B. E. Burnell, C. B. Burr, G. V. Chamberlain, S. T. Conover, J. M. Galbraith, A. Goodfellow, J. W. Handy, J. H. Houston, D. S. Jickling, M. S. Knapp, J. G. R. Manwaring, H. R. Niles, E. D. Rice, G. W. Robb, Edward C. Rumer, W. J. Wall, O. S. Wheeler, A. S. Wheelock.

Grand Traverse—Sara T. Chase, H. B. Garner.

Gratiot—D. K. Andrews, E. A. Bagley, I. N. Brainard, A. J. Ervey, E. P. Felch, C. B. Gardner, B. C. Hall, Stiles Kennedy, E. T. Lamb, A. Stealy.

Hillsdale—Thos. H. E. Bell.

Houghton—W. T. S. Gregg, J. R. W. Kirton, A. I. Lawbaugh, W. E. McNamara, George W. Orr.

Huron—B. Friedlander, D. J. McCall, W. T. Morrison, J. L. Walsh.

Ingham—Clara M. Davis, Guy M. Dunning, Samuel Osborn, J. G. Rulison, E. F. Shaw, L. W. Toales.

Ionia—C. S. Cope, F. W. Martin, G. W. Moore.

Iosco—J. J. Fitzgerald, J. R. Appelbe.

Isabella—F. Freeman Gillett.

Jackson—A. E. Bulson, R. Grace Hendrick, T. S. Langford, C. G. Parnall, D. E. Robinson, F. W. Rogers, Martha C. Strong, E. C. Taylor.

Kalamazoo Academy of Medicine—Ralph E. Balch, J. W. Bosman, Edw. J. Bernstein, A. W. Crane, G. F. Inch, O. A. LaCrone, W. L. McBeth, C. H. McKain, Herman Ostrander, Della P. Pierce, J. T. Upjohn, A. H. Rockewll, Benj.

A. Shepard, Frederick Shillito, E. P. Wilbur, A. S. Youngs.

Kent—E. Bigham, J. D. Brook, Wm. Fuller, J. G. Huizinga, N. H. Kassabian, T. W. Koon, F. J. Lee, A. J. Patterson, Louis A. Roller, S. L. Rozema, Richard R. Smith, R. H. Spencer, J. B. Whinery, W. G. Young.

Lapeer—G. L. Chamberlain, John Eggleston, John V. Frazier, E. A. Jones, H. E. Randall, M. E. Williams.

Lenawee—R. M. Eccles, Isaac L. Spalding, D. L. Treat.

Livingston—J. E. Browne.

Manistee—Wm. E. Coates, Jas. A. King, Harlen MacMullen.

Marquette—Theo. A. Felch, A. W. Hornbogen.

Mason—F. W. Heysett, W. H. Taylor.

Mecosta—B. L. Franklin, L. E. Kelsey, Joseph McNeece, F. W. Noble.

Midland—W. H. Brock, W. A. DeFoe, E. J. Dougher, C. Sjolander, E. R. Swift.

Monroe—Wm. F. Acker.

Montcalm—W. H. Belknap, D. K. Black, R. H. Blaisdell, H. L. Bower, E. M. Highfield, Jas. Purdon.

Muskegon—Charles F. Smith.

Oakland—E. A. Christian, G. W. MacKinnon.

Osceola-Lake—E. Nelson Heysett, A. Holm.

O. M. C. O. R. O.—S. E. Hooper, C .H. O'Neil, W. G. Young.

Ottawa—D. G. Cook, H. J. Poppen.

St. Clair—J. L. Chester, J. W. Inches, A. D. MacLaren, G. S. Ney, J. S. Platt, Charles B. Stockwell, Alex. Thomson, A. E. Thompson, Mortimer Willson.

St. Joseph—Blanche M. Haines.

Saginaw—G. L. Alger, D. E. Bagshaw, A. L. Bailey, B. H. Beckwith, N. R. Bradley, Thos. E. Briggs, Harriet V. B. Brooks, J. D. Bruce, R. F. Bruce, Frances Carter, W. B. Clarke, M. W. Clift, D. B. Cornell, B. F. Crane, E. E. Curtis, W. L. Dickinson, Wealthy Dibble, F. W. Edelman, C. W. Ellis, W. F. English, F. B. Florentine, Benj. Franklin, F. W. Freeman, J. W. Freeman, G. H. Ferguson, H. E. Gerber, Arthur Grigg, C. L. Gruber, W. K. Kahn, Karl Kanzler, J. W. Kemp, A. E. Leitch, Martha L. Longstreet, J. C. McCormick, Thomas McEwen, Robert McGregor, H. M. Leach, Jas. W. McMeekin, R. Campbell MacGregor, J. Neil MacLane, H. W. Montgomery, M. F. Morse, H. P. Meyer, W. J. O'Reilly, S. C. J. Ostrom, F. E. Parkinson, J. H. Powers, C. P. Ramoth, Emil P. W. Richter. A. S. Rogers, B. B. Rowe, Flora H. Rich, C. H. Sample, S. I. Small, Fletcher S. Smith, C. T. Starker, G. W. Stewart, T. M. Williamson, G. R. Wilson, P. S. Windham.

Sanilac—J. W. Scott, A. W. Truesdale.

Shiawassee—J. N. Eldred, Edwin Elliott, J. Haviland, A. M. Hume, W. C. Hume, W. E. Ward, P. S. Willson.

Tri-County—B. H. McMullen, G. D. Miller, Otto L. Rickerd.

Tuscola—T. P. Bender, B. C. Bradshaw, O. G. Cowley, W. C. Garvin, F. Hammond, J. E. Handy, Jas. H. Hays, John MacKenzie, J. E. Maurer, A. L. Seeley.

Washtenaw—Wm. F. Breakey, Bishop Canfield, C. B. G. de Nancrede, S. Fouch, Hugo A. Freund, O. Griffin, H. Klingman, J. G. Lynds, A. R. Peebles, Reuben Peterson, James C. Sales, Frank Smithies, J. A. Wessinger.

Wayne—Emil Amberg, J. A. Attridge, H. H. Begle, J. N. Bell, A. P. Biddle, A. W. Blain, Jr., W. E. Blodgett, G. F. Britton, G. V. Brown, Flemming Carrow, J. H. Carstens, Grace M. Clarke, A. N. Collins, Leartus Connor, James E. Davis, W. M. Donald, Johann Flinterman, J. E. Gleason, G. G. Gordon, Preston M. Hickey, L. J. Hirschman, Vernon J. Hooper, E. M. Houghton, Florence Huson, W. H. Hutchings, David Inglis, C. H. Judd, G. A. Kirker, Daniel LaFerte, Oliver H. Lau, H. W. Longyear, Theodore A. McGraw, J. A. McVeigh, F. J. W. Maguire, W. P. Manton, W. F. Metcalf, C. G. Miner, T. H. Newberry, Carl S. Oakman, Anna O'Dell, W. R. Parker, Roland Parmeter, G. O. Pratt, W. A. Repp, F. W. Robbins, J. W. Rothacher, R. S. Rowland, Benjamin R. Schenck, Burt R. Shurly, Ernest L. Shurly, Frank Burr Tibbals, H. R. Varney, V. C. Vaughan, H. O. Walker, Frank B. Walker, A. B. Wickham, Hal C. Wyman, H. W. Yates.

Book Notices

Osler's Modern Medicine. Its Theory and Practice. In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illus-

trated. Volume I. Cloth, $6.00 net. Lea Brothers & Co., Philadelphia, 1907.

In many respects this new work, edited by Osler and McCrae, promises to be the most important of the present decade. That there is a distinct field for a set of volumes, containing more extensive information that that found in the ordinary text book, there can be no doubt. It is planned that the whole field of internal medicine will be systematically covered by a series of monographs, written by men who are recognized authorities and these monographs will be so arranged that they will bear the proper relation to one another and to the science of medicine.

No other man in the profession is so well equipped for such a work as is Osler. Himself possessed of a wide knowledge, familiar with the literature, acquainted with the men all over the world who are doing things, Osler has that intuitive power of knowing what men can do and who can do a certain task best.

Associated in the editorial work with Osler, is McCrae, who has had many years experience both in practical medicine and in literary work. He is one of the best of the younger generation of clinical teachers and is thoroughly conversant with the needs of both graduate and undergraduate students.

In the introduction the editor says: "The work is designed primarily for the practitioner who wishes to keep himself informed of the existing state of our knowledge in clinical medicine. The first consideration in a work of this kind is that it shall be helpful. * * * * The authors will be found to have simplified abstruse and complicated knowledge, and to have presented it in a form readily assimilable by the men who have to use it. The hope of the profession is with the men who do its daily work in practice. Our labors are in vain—all the manifold contributions of science, the incessant researches into the complex problems of life, normal and perverted, the profound and far-reaching conclusions of the thinkers and originators—all these are sounding brass and tinkling cymbals unless they result in making men better able to fight the battle against disease, better equipped for their ministry of healing. The carrying out of new methods of treatment, the exchange of the old for the new weapons and methods of warfare, these rest with the rank and file of the profession who make effective and translate into practice the new knowledge."

It is planned to issue a new volume every three months.

The first volume, which has now come to hand, contains an introduction by the editor himself, which he entitles "The Evolution of Internal Medicine"—a most interesting history of medicine from pre-Hippocratic times to the present day, tracing the growth of the science and art in the various schools and countries which contributed to build up the existing structure of knowledge. To this is added a forecast of the lines on which further development would most fruitfully proceed. The whole introduction is, of course, scholarly and epigrammatic, marked by the keen observation of the trained physician, who is also a man of the world, full of wisdom and altogether delightful reading.

Dr. J. G. Adami, of Montreal, begins the body of the volume with an article on "Heredity and Predisposition," in which he asserts, with much emphasis: "It is impossible for there to be inheritance proper of infectious diseases. There is no such thing as inherited smallpox, inherited tuberculosis, or hereditary syphilis. * * * * This, however, is not the same as stating that no inheritance of any order can occur in connection with specific disease." The article is thoroughly up to date, and from the charm of the author's style, this most important subject is made very easily understood.

"Auto-intoxications," from the pen of Dr. Englebert Taylor, of San Francisco, is another of these conclusive and exhaustive articles on a difficult subject which will make Osler's Modern Medicine the recognized authority for the next quarter of a century. His treatment of the question of Gastro-Intestinal Auto-Intoxication is of the most illuminating character, and is full of helpful suggestions to the general practitioner in the treatment of diseases consequent on malnutrition.

Nearly 60 pages are devoted by Dr. Charles F. Craig, U. S. A., to the consideration of "Malarial Fevers." The article is comprehensive, accepting, of course, the theory of transmission by mosquitoes, and pointing out that a fever which is not cured by the proper administration of quinine is not of malarial origin. His suggestions as to prophylaxis are in every respect valuable.

Other thoroughly practical clinical articles are those by Dr. Thomas B. Futcher, of Johns Hopkins, on "Diabetes and Gout;" by Dr. J. M. Anders on "Obesity;" and by Dr. George F. Still, of London, on "Rickets." The scientific physician

will regard the profoundly scholarly article on "Metabolism, Normal and in Disease," by Chittenden, of Yale, as of fundamental value. There are excellent articles, also, by Drs. Alfred Gordon and David L. Edsall, of Philadelphia, Alexander Lambert, of New York, F. G. Novy, of Ann Arbor, James H. Wright, of Boston, and others.

From the mechanical standpoint the book leaves little to be desired. The red cloth binding and heavy gilt lettering are most attractive.

Tumors, Innocent and Malignant. Their Clinical Characters and Appropriate Treatment. By J. Bland-Sutton, F. R. C. S., Surgeon to and Member of the Cancer Investigation Committee of the Middlesex Hospital, etc. Fourth edition, revised. Octavo; 675 pages; 355 illustrations. Chicago: W. T. Keener & Co., 1907. Price, $5.00.

Bland-Sutton's work on tumors is well known. In this new edition there has been an addition of much new matter and a thorough revision of the text. An account of the etiology of cancer is given in an interesting way, but no attempt to reconcile the three main theories is made. A new chapter on chorion-epithelioma has been included, which, while by no means complete, is an excellent addition.

The classification adopted is a practical one: Group (1) connective tissue tumors; (2) tumor diseases of the teeth; (3) epithelial tumors; (4) tumors arising from the chorionic villi; (5) teratomata and dermoids; (6) cysts. Such a grouping leaves much to be desired, when considered from the viewpoint of the pathologist, but it has many advantages for the surgeon and clinician.

The chapters on bone sarcoma and neuromata in general are among the best in the book. Carcinoma of the breast might well receive more attention; only ten pages are devoted to this most important topic.

The references at the end of each chapter, and the excellent index are to be commended.

A Study of the Human Bloodvessels in Health and Disease; a Supplement to "The Origin of Disease." By Arthur V. Meigs, M. D., Physician to the Pennsylvania Hospital. Octavo; 136 pages; with 123 illustrations. Philadelphia and London; J. B. Lippincott Company, 1907.

So far as we know, this is the only book which deals exhaustively with the human blood vessels. It is a valuable, even if erratic, monograph, giving the author's personal knowledge gained through a number of years of attention to the subject.

After introductory chapters, there are sections describing the diseases of blood vessels in general, diseases of the radial arteries and veins, and diseases of the blood vessels of the various organs. Each chapter is filled with information, much of which will appeal to the reader as deserving of thought. We have rarely read a book which gives us more new ideas, or made us think more about the old ideas than did this. Many of the author's statements are contrary to generally accepted views, and undoubtedly will not be accepted by many. Nevertheless, they should be accorded careful attention.

The illustrations are a special feature and are beautifully done, being drawn directly on steel plates with the aid of the camera lucida.

Biographic Clinics.—Vol. IV. By George M. Gould, M. D., Editor of American Medicine. 12 mo., 375 pages. Cloth, $1.00 net. Philadelphia, P. Blakiston's Sons & Co., 1906.

This is a continuation of Dr. Gould's remarkable essays on the lives of some notables of the past who had wretched health, due, according to the author, to an uncorrected eye strain. Whatever one's conviction may be as to the truth of Gould's theory, he cannot but admire his literary ability and he cannot fail to enjoy the reading of these essays. In this volume, there are biographies of Balzac, "the hero of overwork;" Tchaiskovsky, the composer; Flaubert, Lafcadio Hearn and Berlioz. Throughout, numerous passages from autobiographies and letters are quoted in support of the eye strain idea.

We have found the most interesting the chapter on Balzac, than whom no author ever lived a more unhygienic life, at least in regard to eating and working. That he had defective eyes seems plausible, but that all his ills were due to these defects admits of some debate.

Other chapters in the book are: "Progress," "The Cause, Nature and Consequences of Eye Strain," "A Study of the Failure in Ophthalmic Progress," "The Exaggeration and Hobby-riding of the Eye Strain Theorist," "The Eye Strain Origin of Epilepsy."

Biographic Clinics.—Vol. V. By George M. Gould. Uniform with the above. Philadelphia, P. Blakiston's Sons & Company, 1906.

This volume contains a chapter on "Biology and Ophthalmology;" eleven chapters, each one of which is a case history from the author's experience; a chapter on "The Mysteries and Sources of Suicide" and others, such as "Ten Types of Ophthalmic Charlatanism," Eye Strain and Crime," and "The Ocular Origin of Eye Strain."

Most of these chapters are reprinted from articles published by the author in various journals, articles which have occasioned not a little discussion. After reading them, one has a feeling of discontent, for either the author is wrong, or all of us are neglecting a certain class of patients, whose ills are variously diagnosed as indigestion, hysteria, epilepsy or neurasthenia. As it is unquestionably well for every one, now and then, to pause and wonder if he is doing the best for his patients, we recommend these volumes, especially the last, as unsurpassed for stimulating this thought. The statements made will be variously judged, according to the experience of the reader.

These volumes are attractively bound in red cloth.

A Text-Book Upon the Pathogenic Bacteria.—For Students of Medicine and Physicians. By Joseph McFarland, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia. New (5th) Edition. Octavo volume of 647 pages, fully illustrated, a number in colors. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $3.50 net.

This text book continues to be popular and is widely used in medical schools. It contains excellent chapters on the Evolution of Bacteriology, Infection and Immunity. The laboratory side is described in sections dealing with "The Methods of Observing Bacteria," "Sterilization and Disinfection," "Culture Methods," "Animal Experimentation" and "Differentiation of Bacteria."

Part II deals with "Specific Diseases and Their Bacteria," and is very satisfactory.

One may criticise the scope of the book, rather than the book itself. The author has confined his text to the pathogenic bacteria which makes it inadequate for the ordinary course in bacteriology, in which it is customary to begin with the study of non-pathogenic forms. One wonders why a discussion of opsonins is not included in this new edition.

The illustrations are good.

Psychology Applied to Medicine. Introductory Studies. By David W. Wells, M. D., Lecturer on Mental Physiology, Boston University Medical School. 12 mo., 141 pages, illustrated. Cloth, $1.50 net. Philadelphia: F. A. Davis & Company.

The author has had several years' experience in lecturing to medical students and has put his lectures into book form. He believes that medical education has tended toward ultra-materialism, the psychological aspect being neglected. The matter in this book is an attempt, therefore, to bridge over the gap between psychology and medicine.

The first four chapters deal with reason, instinct, habit, sensation, and certain aspects of the special senses, more especially of sight.

Chapters V, VI and VII are especially entertaining and instructive. They deal with the history, methods and theories of hypnotism, in which the author has apparently done considerable experimentation. A very fair and impartial estimation of the value of hypnotism in medicine is given.

The last three chapters are given up to a discussion of the many forms of mental healing.

The subject matter of the book, too often neglected, is important and is here presented so concisely and in such an elementary style, that the volume can be recommended to all who have given these topics little attention. If one wishes to read along these lines, it is a good book to read first. A bibliography appended will suggest other well known works in which the subject may be further pursued.

A Text-Book of Pathology. By Alfred Stengel, M. D., Professor of Clinical Medicine in the University of Pennsylvania. Fifth Revised Edition. Octavo of 977 pages, with 399 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia and London: W. B. Saunders Company, 1906. Cloth, $5.00 net; Half Morocco, $6.00 net.

There are very few general text books of pathology in English. Stengel's is perhaps the best known. It is excellent so far as it goes, but one will look in vain for information in it beyond that which is very elementary. Inasmuch, however, as it has been the design of the author to prepare a work for the student and one therefore of moderate size, it is unfair to judge the work by higher standards.

It is well written, well illustrated, up to date, well printed and neatly bound. As a reference book for the practical man it is a success.

County Society News

CALHOUN.

Continuing the work of the post graduate course, the following subjects were prepared:

Ear Complications following Measles, Scarlet Fever, La Grippe, etc., Dr. R. D. Sleight, May 6, 1907.

Fractures, Dr. C. S. Gorsline; Dislocations, Dr. H. E. McLennan, May 20, 1907.

Starvation Treatment of Cancer, Dr. T. E. Sands, June 10, 1907.

Diseases of the Biliary Tract, Dr. J. H. Kellogg, June 24, 1907. A. S. KIMBALL, *Sec'y.*

DICKINSON-IRON.

We have about 28 physicians in our counties and 23 members of the Society. We are planning a rousing meeting for June.

H. S. SETHNEY, *Sec'y.*

EATON.

Eaton County Medical Society had for its program, at its April meeting, a symposium on adolescence.

Dr. Lancaster, President of Olivet College, read a paper on "The Adolescent at Home and in the School."

Dr. Wilson, Pastor, M. E. church, Charlotte, spoke of "The Church's Influence During Adolescence."

Dr. Stimson, Eaton Rapids, delivered a paper entitled "The Duty of the Family Physician in Adolescence."

Judge Smith, of Hastings, whose paper was to have been "The Law as Applied to the Adolescent Period," was unable to be present.

The discussion was led by Superintendent Garrick, of Charlotte, and Superintendent Noral, of Olivet.

Many outside of the medical profession were present.

Dr. W. H. Enders having resigned, Dr. A. H. Burleson, of Olivet, was elected secretary-treasurer. A. H. BURLESON, *Sec'y.*

GRAND TRAVERSE.

Renal and Vesical Calculi.

M. S. GREGORY, M. D.

In the consideration of renal and vesical calculi we must look to their size and composition; to the character of the urine, symptoms, prognosis, and treatment. As regards size, calculi are classified as sand, gravel, stone, and calculi * * When concretions are deposited in unchanged urine they are said to be primary; those deposited in urine changed by fermentation are secondary. * * *

Uric acid calculi are very common and constitute from 75 to 90 per cent of all calculi. They are always deposited in acid urine and are primary in the urinary tubules, giving in their passage the symptom-complex of renal colic. Under the microscope we find the uric acid crystals deposited as clusters or smooth spherical bodies, always being colored a reddish tinge. * * *

The urates of ammonium, sodium and calcium form a very large class of calculi. Especially as they form a high per cent when combined with calcium oxalate. In children many calculi of the urates with uric acid are found. These uric acid calculi are small in size, light gray in color, and produce infarcts in the kidneys. These infarcts occur from the second to the tenth day, but are never found in the still born. The uric acid stones are often found in febrile children, always deposited in acid urine.

Calcium oxalate calculi are large rough masses commonly spoken of as "mulberry" masses. However, they are not always large, but some may be as small as hemp seeds. The nucleus is usually uric acid or one of the urates, and always deposited in acid urine. When the stone becomes large and rough, cystitis may set in and render the urine alkaline by fermentation.

* * * Cystin and xanthin and calcium phosphate are rare concretions. * * * One of the most important concretions, from a clinical standpoint, is the ammonio-magnesium phosphate stone, as it occurs in most cases of infected bladder. * * * Whenever ammonio-magnesium prosphate crystals are found in the urine we may be sure of infection and always suspect a stone.

* * * The reaction of the urine is always the determining factor in the formation of any deposits. In acid urine the concretions are most always uric acid and this is well indicated when the cooling yields a precipitate of uric acid crystals. * * * When calcium oxalate crystals are

found, a calcium oxalate stone may be suspected. * * * The concretions found in alkaline urines are usually vesical in origin and are deposited upon primary renal calculi. The most common are the mixed phosphates. * * *

Renal stones may or may not produce symptoms; if they do they give usually the complex spoken of as renal colic. A sudden sharp paroxysm of pain felt first in the lumbar or hypogastric region, then extending down the line of the ureter to the scrotum and end of the penis. Vesical irritation and tenesmus are common. Fainting and collapse are not infrequent. The pain may disappear as suddenly as it appeared. * * Frequent urination is also another symptom, especially during the day. This symptom depends on the irergularity of the stone, the desire to urinate being proportionate to the irregularity. One must not confuse this symptom with the desire to urinate that comes from an enlarged prostate. In case of enlarged prostate the frequent desire to urinate comes at night. The pain is characteristic, being a smarting, burning pain, worse at the end of micturition, because at that time the stone lies in contact with the mucous membrane. As the stone gets larger and smoother the pain becomes less and may disappear.

Another important symptom is the sudden interruption of the stream during micturition. This symptom is produced by the valve action of the stone at the neck of the bladder. Sometimes the contact of the stone with the mucous membrane causes bleeding, which may be an important symptom. * * * After taking into account the above symptoms we are not certain of the stone until we have sounded with an urethral sound or searcher. This is the only true diagnosis. Prognosis is good when we are able to remove every particle of the stone. * * *

The non-operative treatment has its greatest efficacy in prophylaxis. Large quantities of water for the lithemic, * * * no meats for those having uric acid in urine. A mild laxative of calomel and soda is often indicated but prolonged catharsis with salines is contra-indicated because it concentrates the urine. Operative treatment is always indicated if the calculi are formed. * * * Of course the size and composition of the stone and the condition of kidneys, prostate, and bladder, and age of the patient, will influence the question of operation. * * The median perineal lithotomy is a very successful treatment.

Discussion by Drs. H. B. Garner, James Canavan, Wilhelm, and Martin.

M. M. CANAVAN, *Sec'y.*

IONIA.

The second session of the season of the Ionia County Medical Society was held in Ionia on April 18. The members visited the Michigan Reformatory, witnessed clinics and operations at the hospital, were banqueted at the Hotel Bailey, and the evening was taken up with postprandial remarks, reading of reports, transaction of business, appointment of committees, and the reading of a paper on Pneumonia by Dr. Geo. P. Winchell, of Ionia. The committee to co-operate with the Tuberculosis committee of the State Society was appointed as follows: Dr. W. F. Braley, Saranac; Dr. C. B. Gauss, Palo; Dr. J. J. McCann, Ionia; Dr. G. P. Winchell, Ionia; Dr. H. O. Haines, Ionia.

C. S. COPE, *Sec'y.-Treas.*

SAGINAW.

At a meeting of the Saginaw County Medical Society on May 8, Dr. F. B. Florentine read a paper on

Post-Operative Abdominal Fistulae.

By post-operative abdominal fistulae I do not mean fistulous openings as caused by systemic, or organic internal lesions, such as result from gall-stones, or empyema of various organs, but rather to that which is only too often induced by a faulty, reckless, operative technic in abdominal surgery. For example, in overlooking foreign bodies, such as sponges, forceps, gauze, etc., in the abdominal cavity. Of course, accidents will occasionally, and unavoidably, happen with most careful and skillful surgeons. However, it behooves us to be exceedingly careful in these operations, as the consequences are sometimes very serious. I believe, however, that by far the most frequent causes of abdominal fistulae are displaced, or floating, if you please, ligatures and sutures. At least, it proved so in my experience. We know that silk ligatures, for instance, when thoroughly sterilized, cause no evil consequences, when applied to healthy tissue, as they are either encysted, or slowly removed by leucocytes. But when the tissues of the pedicle are infiltrated with inflammatory products, and especially when the Fallopian tube is septic, the ligature, instead of being absorbed or encysted excites inflamma-

tion and becomes surrounded with pus, drops off, an abscess is formed, and frequently opens through the abdominal cicatrix, forming a sinus therein. And the latter will persist for months or years, until the ligature is found and removed, as anyone knows who has had any experience with these troublesome cases. In support of my statements, allow me to briefly report among others, some cases of abdominal fistulae, caused by ligatures and sutures in my own practice.

Mrs. K., aged 36, quite well and strong, with the exception of a small abdominal fistula of nine months' duration, following double ovariotomy. After abdominal section, I found nothing remarkable in the cavity with the exception of a few adhesions, and a pedicle, minus the usual ligature; the other, showing evidence of one. Then,after thoroughly searching, and dissecting the abdominal wall, for the source of trouble, I found it—a braided-silk ligature of large size, and well preserved. The operation was successful, and the patient is at present enjoying perfect health, with no evidence of fistula.

Mrs. A. K., aged 40. Five months after ventro-fixation of the uterus, I was consulted by her in regard to a fistulous opening which refused to heal. I operated and found a large chromicized catgut suture as the cause of trouble.

Mrs. C., 38. Poor health, and thin; about 14 months after a left ovariotomy, suffered from fistula since operation, and submitted to another operation in order to close opening. After section, I found the right ovary diseased, and removed it, in hope to heal the fistula, but failed. About two months ago, she again submitted to another operation for the closure of said fistula. After carefully and extensively dissecting the abdominal wall I, at last, found the cause of trouble—a silkworm gut suture which evidently had been used in closing the belly, and was lost in a so-called stitch-abscess.

WAYNE.

On May 6th, a meeting was held to discuss the possibility of the Society acquiring a meeting place and library. Dr. L. J. Hirschman spoke of the necessity of a meeting place other than the one used at present, of the difficulty of obtaining a suitable hall, and of the desirability of immediate steps being taken toward securing a medical building. In March, a number of members gathered informally to discuss the project and a provisional committee appointed to look over the situation.

Dr. Leartus Connor read an account of the beginning of the Cleveland Medical Library. Dr. H. M. Rich showed how the Boston Medical Library had grown from a small beginning, and Dr. B. R. Schenck sketched the history of the years of effort required to establish a home for the New York Academy of Medicine and the influence which the library has had upon medical affairs in New York.

A committee was authorized to devise ways and means for acquiring a building fund.

The election, held on May 21st, was largely attended, 197 ballots being cast. The officers elected were: President, Dr. A. N. Collins; vice-president, Dr. Kenneth Gunsolus; secretary-treasurer, Dr. W. D. Ford (re-elected); directors, Drs. J. N. Bell, H. W. Yates, G. L. Kiefer, P. M. Hickey, Florence Huson; executive committee of defense league, Drs. G. L. Kiefer and A. P. Biddle.

Correspondence.

Tecumseh, Mich., May 18, 1907.

Dr. B. R. Schenck,
Secretary M. S. M. S.,
Detroit, Mich.:

Dear Doctor: Please allow me to return to yourself and the State Medical Society my sincere thanks and heartfelt gratitude for the unlooked for and unexpected honor bestowed upon me, in my election as an honorary member. My next year will be my eightieth birthday and with fifty-six years as a physician, makes me feel that my race is fully run.

Again thanking you all,

Truly yours,

SAMUEL CATLIN.

SOME IMPRESSIONS GAINED FROM VISITING THE LARGE HOSPITALS IN ENGLAND.

Angus McLean, M. D.
Detroit.

Upon visiting the larger hospitals of England a person becomes impressed with the magnitude of these institutions. The majority of them aver-

age from 400 to 500, and some have 1,000 beds; the question naturally arises as to how they are supported. There are 95 hospitals in the city of London, only four of which have paying departments, that is where patients pay for their care. Of the other 91, which are general and special institutions, no charge is made to the patient. Some of these have a nominal bequest from the patients; in most of the hospitals for women the patients are required to furnish comb, brush and soap. In some of the special hospitals the patients are required to furnish a change of linen, while in others they are charged 6d a week for laundry. In two or three of the large neurological institutions 1s per week is charged for tea and coffee, when served. All the larger hospitals, such as St. Bartholomew's, London Hospital, St. Peter's, St. Thomas's and St. Mary's, accept all patients free of charge.

There is only one hospital in London, St. Bartholomew's, that has investment funds sufficient to maintain it. This is the oldest charitable institution in England, and was founded in 1123.

The city or municipality has no institution of its own. All institutions are supported by investments, legacies, voluntary contributions and different hospital funds. They have what is known as the Sunday Hospital Fund, the Saturday Hospital Fund, League of Mercy Fund, and the City of London has also a fund known as the Prince of Wales Fund. These funds are placed in the hands of a central committee which distributes the proceeds among the different charitable institutions.

The Sunday Hospital Fund for London amounts to about $20,000 annually—while the Saturday Hospital Fund (contributed largely by the working men) amounts to about one-half that amount. Liverpool, with a population of about 500,000, has an annual Sunday Hospital Fund of over $70,000. Leeds, with a smaller population, has an annual Saturday Hospital Fund of $38,000. The League of Mercy is composed largely of ladies; they solicit funds, give concerts and entertainments, the noted artists denoting their services. In this way this League raises several hundred thousand dollars each year.

There are within the City of London 15 medical schools besides the post-graduate schools, the Royal College of Physicians and the Royal College of Surgeons; there are also 130 free dispensaries. These medical schools are all connected with some large general hospital. Outside of the City of London there are 30 medical schools in the United Kingdom, so there is no lack of opportunity for medical study, and always an overabundance of clinical material. There are several prominent medical centers in England, outside of London, viz., Oxford, Birmingham, Leeds, Newcastle, Manchester, Sheffield and others, each one having its noted medical men. The city of Leeds is situated in the northern portion of England and has a large general infirmary founded in 1767, with over 400 beds which are well filled. This institution has become well known to the medical profession throughout the world by its noted medical men. In this institution is a statue of William Hey, well known to anatomists by the ligament named after him, "Hey's ligament." There are also statues here of Wheelhouse, McGill and others. In this institution there is a rather unpretentious, somewhat dingy operating theater in which has been done operative work that has done so much to advance the surgery of the gall-bladder and biliary ducts. This is the theater in which A. W. Mayo Robson began his work, about a quarter of a century ago, which has made his name familiar to every reader of recent surgical literature. After becoming noted, he located in London, where he now resides and practices. Mr. Moynihan, who was his assistant at this institution, received the appointment upon the resignation of Mr. Robson and has since made himself well known by his work and the writing of his books on gall stone surgery and abdominal surgery which have had such a wide sale in our country. As his name would indicate, he is of Irish descent, but born in England. This is one of the interesting surgical points of England at present, many foreign physicians and surgeons go to Leeds to see this man and his assistants do their operations. There is nothing prepossessing about this institution or its operating room, and when you wonder why it has become so noted you can only say it is by the large amount of material present and the willingness of the operator to make the best use of the same. Two days a week are given up to operating in this institution by Mr. Moynihan, from 8 to 10 gall-stone and stomach operations being done each day. Surgeons who have visited a number of institutions in England say that, in their opinion, the best surgical work here is done in Leeds. There are several other good surgeons connected with the infirmary.

Suprapubic prostatectomy after the method of Mr. Freyer has become very popular here and one of the most interesting surgical clinics at

the present time given in London is that of Mr. Freyer's, held at St. Peter's Hospital, for stone and bladder diseases. Operations are done here twice a week; the gallery space is more than crowded each day and mostly by foreigners. This operation is the one operation accepted by all English surgeons for prostatectomy. I have seen five different surgeons remove the prostate and they all chose the suprapubic method. The perineal method was not even mentioned or considered by any one of them. It makes no difference as to the position or size of the glands; they are all removed suprapubically.

For the medical men the most interesting point in England at present is Wright's (opsonic) laboratory. Medical men from all parts of the country are here visiting this laboratory. Dr. Wright has no hospital appointment, but is connected with the St. Mary's Medical School and works at St. Mary's General Hospital. His laboratory is a rather small affair situated in an obscure corner, in the rear of the institution. You can scarcely realize upon entering it that you are in the laboratory and in the presence of the physician who has recently caused so much interest in the medical world. When I visited the institution, he and three or four assistants were busily engaged in administering their serums. There were about 30 patients present waiting their turn for the injection. Two clerks were present making notes on cards, each patient having a card from the laboratory, where the date and amount of each injection was kept and notes made on the progress, etc., of the case. All the large hospitals have two or three men at work on this same theory, and a great deal of work is being done at present along this line. In inquiring of the different men connected with the hospital as to what they thought of the opsonic index, the opinions were divided. Some of the men were quite enthusiastic, while others were skeptical and could not see that it as yet had substantiated anything. All seemed to be agreed on the point that it had not yet been sufficiently worked out, that it would take more work and more time to work out this theory and decide as to its virtue.

In visiting the operating theatres one notices that the facial masks, caps, and in the majority of cases rubber gloves have been discarded. I visited 10 operating rooms, and I have not seen a facial mask worn in any one of them. This includes operator, assistant and nurse. In two they used skull caps; this was in Charing Cross Hospital and in Mr. Moynihan's operating room. A few of them used rubber gloves, and in several instances the assistant used rubber gloves, while the operator did not. In Mr. Freyer's operating theatre they used neither mask, caps, nor gloves, and in the majority of the operating rooms they use the old marine sponge instead of gauze sponges. When you realize that you are in the home city of Lord Lister, the father and advocate of antisepsis, as he lives here in London, you are impressed with the manner in which that great principle is becoming modified. It really is not antisepsis but strict asepsis as it is practiced here.

Another point that is very noticeable to the visitor is the large wound that each operator makes. It does not appear to make any difference whether it is for a simple exploratory or an abdominal hysterectomy, the wounds are all about the same size, and a person comes to the conclusion that they have no small knives in England.

They do not appear to have any trouble with anesthetics; the anesthetists are appointed as members of the staff. Most of the hospitals have two; they have rooms in the institution and receive a salary. The internes are instructed in anesthetics by these anesthetists.

The surgeons here are very accessible; about all that is necessary to do is to inquire for the house surgeon, sign the hospital register, and he will direct you to any clinic you wish, after instructing you as to what is required of you before entering the theatre. The operators are always courteous and explain what is being done. Mr. Moynihan is very pleasant and makes you feel at home. Mr. Freyer is exceptionally genial, and invites you to ask him to explain anything you do not just understand. He talks freely after each operation (showing specimen, if any), and demonstrates each step of the operation. These men yet have their difficult cases and meet with trouble; so all operations here are not done just as you see them in their text books.

News

At the Hackley Hospital in Muskegon, Dr. Jacob Oosting has been appointed as one of the heads of the medical department. Dr. H. L. Williams was a new appointee on the staff, and Dr. John Vanderlaan was again named as chief of staff.

Dr. Angus McLean, of Detroit, has been elected president of the State Board of Health, and Dr. M. C. Sinclair, of Grand Rapids, vice-president.

Dr. C. L. D. McLaughlin has been appointed health officer of Vermontville.

Dr. Carl J. Rollman, of Burr Oak, has been appointed county physician of St. Joseph County.

Dr. E. T. Morris has been named as health officer of Nashville.

The Detroit Medical Journal has purchased Dr. Leonard's Illustrated Medical Journal, which will be fused with the former under the former's name.

Dr. B. M. Davy has been named to succeed Dr. Nottingham as city physician in Lansing.

Dr. M. A. Stuart, of Detroit, was recently appointed to the medical service of the United States navy.

Dr. Robert B. Armstrong has been elected mayor of Charlevoix.

Dr. O. C. McDonnell has been appointed health officer of Lowell.

On April 1 the State Sanatorium for Tuberculosis was ready to receive patients to the number of 100.

Dr. J. N. Bogan, formerly of Mackinac Island, has located at Green Bay, Wis.

Dr. G. L. Chamberlain has moved from Newberry to Lapeer.

Dr. A. K. Johnson, who formerly practiced at Sault Ste. Marie, has removed to Thorice.

Dr. J. F. Doudna has moved from Lake City to Marion.

Dr. Nelson Abbott, formerly of Mooreston, is now in Lake City.

Dr. N. D. Kean has moved from Ishpeming to Coleman.

Dr. E. A. Martindale has located in Hillsdale, having removed from Jackson.

Dr. M. S. Gregory, recently located in Mt. Pleasant, has removed to Traverse City.

Dr. F. A. Rutherford has returned to his home in Grand Rapids, after spending the past four months in Southern California.

Dr. Anna Odell, formerly of Dubuque, Iowa, has located in Detroit.

Dr. W. H. Enders, of Eaton Rapids, formerly secretary of the Eaton County Medical Society, is in Europe.

Marriages

Dr. J. P. Reed and Mrs. Rosie Anteau, of Rockwood, were married in Newport, April 17.

Dr. Frank Deitch and Miss Anna White, both of Benton Harbor, were married on April 9.

Dr. J. Frank Maguire and Mrs. Ella M. Churchill, both of Alpena, were married on April 1.

William C. Lawrence, M. D., and Miss Florence Lamke, both of Detroit, were married on April 18.

Samuel Stevens, M. D., of Kalamazoo, and Miss Ruby Pearl Berger, of White Pigeon, were married April 16.

Abel J. Baker, M. D., of Grand Rapids, and Miss Jeannette M. Baer, of Portage, were married April 17.

John H. Seaman, M. D., and Mrs. William P. Sprague, of New Haven, were married April 2.

Charles A. D. Clarke, M. D., of Harbor Springs, and Miss Matilde Beit, of Sherman, were married at Cadillac, April 27.

Deaths

Herbert Smith Olney, M. D., formerly a practitioner of Detroit, associated with Dr. Max Ballin, died from tuberculosis on April 15, in Fresno, Cal., aged 30. Dr. Olney was a graduate of the University of Michigan, Department of Medicine and Surgery, 1901.

William Wilson, M. D., of Coldwater, died in Harper Hospital, Detroit, from abscess of the lung, April 14, aged 84.

Francis Edmonds Corbin, M. D., formerly a practitioner in northern Michigan, died in Los Angeles, Cal., from uremia, April 15, aged 59.

John Traston Main, M. D., of Jackson, died at his home May 1, after a long illness, aged 75.

Carl L. Rominger, M. D., died at his home in Ann Arbor from senile debility, April 22, aged 86 years.

J. W. Ferguson, M. D., of Haslett, died in Toledo, May 6, aged 58.

Samuel G. Milner, M. D., of Detroit, died in Grace Hospital, after a surgical operation, May 2, aged 61.

Progress of Medical Science

MEDICINE

Conducted by

T. B. COOLEY, M. D.

Glandular Fever.—SUBLINSKI adds his contribution to the discussion regarding the existence of Pfeiffer's "Drusenfieber" as an independent disease. Pfeiffer, in 1889, described under this name an affection, occurring usually in children from 5 to 8 years old, which commonly begins with high fever, joint pains, restlessness, vomiting, and anorexia. There is difficulty in swallowing and pain in throat and neck on moving the head. Examination shows coated tongue, little or no redness of the pharynx, and distinct swelling and tenderness of the cervical lymph glands, especially those on the posterior edge of the sterno-mastoid. The swelling of these glands is considered of special importance, as swelling of those in front of the sterno-mastoid is common to many other conditions. The glands are hard, and the swelling not diffuse. Fever and difficulty of swallowing usually disappear on the second day, while the swelling continues for several days. More severe cases, with fever for several days, cough, swelling of liver and spleen, and abdominal pain, were said to occur also, the cough and abdominal pain being ascribed by Pfeiffer to swelling of the retro-esophageal and mesenteric glands. According to Pfeiffer suppuration never occurs. He describes also a subacute form, characterized especially by swelling of the abdominal glands, with obstinate diarrhea.

Many have subscribed to Pfeiffer's view of the acute glandular fever as an independent infectious disease, while few have confirmed his observations regarding the subacute type. The frequent occurrence of hemorrhagic nephritis as a complication is considered strong evidence of the specific infectious nature of the disease. Most other observers disagree with Pfeiffer regarding the absence of suppuration, which seems not to have been uncommon in their cases. SUBLINSKI analyzes 21 cases which have come under his own observation. (Many of them seem to be improperly classed under glandular fever.) In most of them he found evidence of the "lymphatic constitution." A number occurred during epidemics of influenza; others after measles and scarlet fever. Several times there was more than one case in the family. Suppuration did not occur. There was hemorrhagic nephritis in three cases. SUBLINSKI believes that all the conditions are explained by the presence of an acute infection of the nose and nasopharynx, or of the pharyngeal tonsil, in which infection the rest of the pharynx is not involved, and says that he has found in these cases simple, follicular, and membranous inflammation of this tissue. He discusses the relations of the pharyngeal and faucial tonsils to the glands of the neck, and shows that it is as natural for the posterior chain to be involved in inflammation of the former as for the anterior to be affected in ordinary anginas. As to the infective agent, he does not believe it to be specific, but different in individual cases—most commonly, probably, the streptococcus. The streptococcus he believes to be almost always involved, even when the primary infection is due to some other organism. (*Zeitschr. fur klin. Med.*, Vol. 62, p. 170.)

Intermittent Fever in Visceral Syphilis.—MANNABERG thinks that the occurrence of fever of the malarial or septic type in syphilis of the viscera, especially the liver, is not generally enough appreciated. He reviews the literature of the subject briefly, pointing out that he himself, in 1896, was the first to report fully on a case of this kind. In the present paper he reports six other cases; of the seven, five were cases of liver syphilis; in one the only local symptoms manifest were in the lungs; while in the remaining one there were no local symptoms whatever, and the diagnosis rested entirely on history and the cure by iodides and mercury. In one case there was no syphilitic history whatever; in three there was a history of tabes in the parents; and in three a more or less definite history of former syphilitic symptoms in the patient. In all the febrile manifestations extended over periods of months. In some it had the typical character and regularity of quotidian or tertian malaria, while in others it was more of the septic type, with less regularity of intermission and paroxysm. Differential diagnosis was necessary in the various cases between syphilis and malaria, sepsis, liver abscess, malignant neoplasm, pulmonary tuberculosis, etc., and in several the definite decision depended entirely on the rapid subsidence of symptoms under iodides, sublimate injections or inunctions. Study of the detailed case reports shows the importance of having this condition in mind in dealing with obscure cases of intermittent fever. (*Zeitschr. fur klin. Med.*, Vol. 62, p. 256.)

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

Diabetes in Children.—In 1899 BOGORAS contributed a monumental study on the subject of diabetes in children, collecting all that the literature of the subject could show. His deductions were drawn from a study of 560 cases. In a recent monographic dissertation (Berlin, 1906) BRANDES has assembled and digested all the subsequent reported cases, to which he has added a critical study of eleven cases from Heubner's clinic. One may gather from this work that, etiologically as well as clinically, diabetes in children shows an extremely variable picture. It almost always has a fatal ending. Sex has little influence. Only 14 cases are here reported as known to exist in the first years of life, and only one of possible congenital diabetes.

Heredity is considered as one of the important etiological factors, while infectious diseases, chilling, teething, and shock are noted. Typical cases exist with no symptoms. The end stage with coma is quite characteristic.

Therapeutic attempts have been disheartening. Organotherapy has been unavailing, dietetics unsatisfactory, the Carlsbad regime unprofitable. In some cases a buttermilk diet or von Noorden's oatmeal gruel has been helpful, but it is too early yet to say as to the ultimate results. Alkaline therapy at the time of acid intoxication is of value. The prognosis is admittedly bad, 84 per cent of deaths in BRANDES' new figures, but as the age of onset increases the prognosis is better. (Editorial, *Pediatrics,* May, '07.)

Epilepsy in Childhood; Its Relation to Other Diseases.—KEELING, from analysis of 150 cases and review of the literature, draws the following conclusions:

1. The pathology of epilepsy appears to resemble in some respects that of cerebral diplegia, chorea, paralysis agitans, neurasthenia, myoclonus, and migraine.
2. Etiologically, rickets is an important factor in the causation of epilepsy.
3. A variety of epilepsy, which may be termed toxic epilepsy, is chiefly gastro-intestinal in origin.
4. Reflex epilepsy is apparently rare; peripheral irritation probably plays a very small part in the production of fits.
5. The effect of measles on epilepsy is uncertain.
6. Chorea is very rarely found associated with epilepsy.
7. Infantile paralyses, especially the congenital forms, are closely realted to epilepsy.
8. An injury or a fright is frequently the exciting cause of a fit. Instrumental delivery may be followed by paresis, with subsequent epilepsy.
9. Enuresis is an occasional sequela of epilepsy.
10. The disease known as night terror is probably a mild form of epilepsy.
11. The three affections most frequently found in the family history of epileptics are epilepsy, migraine, and alcoholism.
12. Migraine appears to be very closely allied to epilepsy, both in family history and in symptoms.
13. The differential diagnosis between Ménière's disease and epilepsy is occasionally difficult. (*The British Journal of Children's Diseases,* April, '07, p. 133.)

On the Use of Living Lactic Acid Bacilli to Combat Intestinal Fermentation in Infancy.—DUNN's findings are of considerable practical interest. Following out work suggested by Tissier (*Annales de l'Institut Pasteur,* XIX, No. 5), after failure with usual methods, he gave living lactic acid bacilli in buttermilk.

He says these results have proved exceedingly striking. The unpasteurized buttermilk has been tried on 35 selected cases. Of these there was evidence of a favorable result, as shown by a change in the character of the dejecta and by a gain in weight, in 23. In three there was an immediate cessation of diarrhea and favorable change in the character of the dejecta, without gain in weight. In nine cases the lactic acid bacilli produced no effect.

All the successful cases were of the fermental type of diarrhea. Irritative and infectious cases did not respond to this method of treatment, while only two of the fermental cases could be classed among the failures. DUNN states that his results are not conclusive, but he believes that the use of living lactic acid bacilli is a harmless method of treatment, and that it may do good in cases of intestinal fermentation.

Its value lies chiefly in the fact that it is an additional resource, applicable in a very difficult class of cases. Although we have accomplished great things in the treatment of these conditions by proper feeding methods, and although the resources provided by the wide limits of percentage feeding are very numerous, nevertheless a certain number of cases remain over which defy all our resources and resist our best therapeutic endeavors. As long as we have such resistant cases we have need of every possible resource, and any new resource can never be superfluous. In conclusion, DUNN says that he believes that the use of living lactic acid bacilli to combat fermentation is a resource which has a logical scientific foundation, and which in time may take a high place in the scale of efficiency. (*Archives of Pediatrics,* April, '07, p. 241.)

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Syphilis and the Public.—BAILEY expounds a few truths, to the significance of which most of us are only too ready to give little heed. Syphilis is a tremendously prevalent and destructive disease; failure to diminish its ravages lies in our unwillingness to give sufficient publicity to the extent of its destroying powers in the false modesty which keeps us from acquainting the young with its terrors, and in the mistaken idea that purification of the male is less necessary than of the female.

He decries the fact that the state never hesitates to protect the stock raiser from animal disease, or the agriculturist from grain and fruit pests, but that the cowardice of man permits him to allow a blight to the human race that ruins a startling per cent of nature's choicest children. He decries the fact that the subject is shunned in the home and in the church. He pities the honored father and respected mother who sit in blissfully ignorant assurance that *their* home and *their* circle are safe from the need of knowledge concerning an agitation for protection against such a loathsome evil. It is upon just such homes that houses of prostitution not infrequently draw for an inmate and rather frequently for a patron.

Six suggestions follow:

First. Let the disease be declared by every state a communicable and contagious disease, and let every case be reported as such under penalty of a heavy fine for neglect on the part of the physician so to do.

Second. Let every house of prostitution be under the strictest surveillance and every diseased woman removed therefrom and placed in a state hospital provided for such purpose, and there detained until she can be given a certificate of health, and during time of detention every effort made to turn her from such a life, and honest employment at living wages furnished her on leaving, even if it be in state work.

Third. Let every man who visits a house of prostitution be obliged to show to an officer of the city or county a certificate of health to have on it his own signature for purposes of identification.

Fourth. Let the statute prevail in every state that no license shall be issued for marriage, and no marriage shall be legalized without such license, until the applicants for marriage have presented a certificate of health from a legally qualified practitioner, the same being countersigned by the president or secretary of the State Board of Health, he having first examined the records of reported luetic disease in the office of the State Board of Health and verified the physician's signature as that of one legally qualified to practice medicine.

Fifth. The fees for all certificates under the above provisions to be fixed by statute and evidence that any one has charged less or more for said certificates than the amount fixed by law to be a conviction of favoritism or bribery and punished by fine as a misdemeanor.

Sixth. That a brief and forceful exposition of the history, character, dangers from and mode of transmission of luetic diseases be prepared and adopted by the State Board of Health of each state and a copy of the same placed in the hands of every boy and girl in the state at the age of fifteen years. That at the same time a copy of the same be placed in the hands of the parent or guardian of each child with a request for help and admonition to be extended to the child in the reading and study of the article furnished by provision of the statute. (*American Journal of Dermatology and Genito-Urinary Diseases,* May '07.)

ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

Plaster of Paris: The Effects of Various Substances Upon Its Rate of Setting and the Subsequent Strength and Durability of the Cast.—WALTER G. STERN closes his article with the following conclusions:

1st. The orthopedic surgeon should select for his use a pure, well made and well kept, unadulterated brand of plaster of paris. Such a plaster will set in about 7 minutes, which is fast enough for all ordinary work, and yields a cast of the highest strength and durability.

2d. The use of starch crinoline bandages as the support in the application of the plaster does not interfere materially with either its rate of setting or its tensile strength. The various forms of wire gauze bandages yield a cast of increased tensile strength and therefore a lighter cast.

3d. Portland cement, when used with plaster of paris in amounts varying from 10 to 20 per cent, yields a cast of superior hardness, strength and durability. It is especially adapted for use about the foot, ankle, and about the thigh in the Lorenz operation.

4th. Moisture disintegrates, softens and dissolves plaster casts.

5th. The waterproofing of plaster casts by mixing the plaster bandages in a solution of sodium silicate is impractical. The finished cast should be thoroughly coated with sodium silicate solution after hardening. The hardening of plaster models, shells, corsets, etc., can readily be accomplished by dipping or painting them with a hot alum solution.

6th. The addition or use of any form of accelerator yields a soft and friable set, and the cast is of insufficient tensile strength and resistance to abrasion to possess the lasting qualities demanded by the majority of orthopedic procedures. The worst accelerators in this regard are common alum and potassium sulphate. The practice of using poor plaster and then "doctoring it up" with an accelerator to make it harden rapidly should be abandoned.

7th. The use of "quick setting dental impression" plaster is also to be condemned for the same reasons. They almost invariably contain considerable amounts of potassium sulphate which renders them brittle and friable. The regular slow-setting plasters obtainable on demand almost everywhere in our country are pure and unadulterated, and when kept in clean, dry containers present the ideal material for orthopedic casts; they can be wound into bandages with starch, crinoline or wire gauze, and where especially heavy wear is expected can be advantageously mixed with 10 to 20 per cent of Portland cement. (*Am. Jour, Orthopedic Surg.*, April, 1907, IV, 4, p. 352.)

The Treatment of Faulty Weight-Bearing in "Weak" and "Flat" Feet.—ROBERT B. OSGOOD closes with the following conclusions:

The exercise treatment of weak feet is admitted by all to be rational and desirable. That it is much neglected in much private work, and practically unemployed in most hospital clinics, we feel sure. In private work, by regular office appointments, we can have this exercise treatment supervised by ourselves or our helpers, and should make the patient feel that it is as important as our exercise work in scoliosis.

Careful attention should be paid to the gait. The admonition which we probably all received from our own parents, to turn our toes out in walking, should be combatted, and, in its place, lessons in a straight, to forward, springy gait should be given.

We believe that in the future more orthopedic apparatus will be corrective and less simply retentive. Proper shoes are the most important form of apparatus. Through co-operation of manufacturers and orthopedic men, several lasts which are made on good, non-constricting lines, and are fairly flexible, are to be had ready made. For the active hours of the day we should insist that shoes which favor slight adduction of the fore foot, and give wide space for toe action, should be worn. (*Am. Jour. Orthopedic Surg.*, Oct., 1906, IV, 2, p. 137.)